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                now available on STN
        Aug 26
NEWS 6
                Sequence searching in REGISTRY enhanced
NEWS 7
        Sep 03
                JAPIO has been reloaded and enhanced
NEWS 8
        Sep 16
                Experimental properties added to the REGISTRY file
NEWS 9
        Sep 16 CA Section Thesaurus available in CAPLUS and CA
        Oct 01
NEWS 10
                CASREACT Enriched with Reactions from 1907 to 1985
        Oct 24
NEWS 11
                BEILSTEIN adds new search fields
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                Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 13
                DKILIT has been renamed APOLLIT
        Nov 18
NEWS 14
        Nov 25 More calculated properties added to REGISTRY
NEWS 15 Dec 04 CSA files on STN
NEWS 16 Dec 17
                PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 17
        Dec 17
                TOXCENTER enhanced with additional content
NEWS 18
        Dec 17
                Adis Clinical Trials Insight now available on STN
NEWS 19
        Jan 29
                Simultaneous left and right truncation added to COMPENDEX,
                ENERGY, INSPEC
NEWS 20 Feb 13
                CANCERLIT is no longer being updated
NEWS 21 Feb 24 METADEX enhancements
NEWS 22 Feb 24 PCTGEN now available on STN
NEWS 23 Feb 24
                TEMA now available on STN
NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation
NEWS 25
        Feb 26
                PCTFULL now contains images
NEWS 26 Mar 04
                SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 27
        Mar 20
                EVENTLINE will be removed from STN
        Mar 24
NEWS 28
                PATDPAFULL now available on STN
NEWS 29
        Mar 24
                Additional information for trade-named substances without
                structures available in REGISTRY
NEWS 30
        Apr 11
                Display formats in DGENE enhanced
NEWS 31
        Apr 14 MEDLINE Reload
NEWS 32 Apr 17
                Polymer searching in REGISTRY enhanced
NEWS 33
        Apr 21
                Indexing from 1947 to 1956 being added to records in CA/CAPLUS
NEWS 34 Apr 21
                New current-awareness alert (SDI) frequency in
                WPIDS/WPINDEX/WPIX
NEWS 35 Apr 28
                RDISCLOSURE now available on STN
NEWS 36 May 05
                Pharmacokinetic information and systematic chemical names
                added to PHAR
```

May 15 MEDLINE file segment of TOXCENTER reloaded

NEWS 40 May 19 Simultaneous left and right truncation added to WSCA

May 16 CHEMREACT will be removed from STN

May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated

Patel

NEWS 37

NEWS 38

NEWS 39

NEWS 41 May 19 RAPRA enhanced with new search field, simultaneous left and right truncation

NEWS 42 Jun 06 Simultaneous left and right truncation added to CBNB

NEWS 43 Jun 06 PASCAL enhanced with additional data

NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003

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=> file reg
COST IN U.S. DOLLARS

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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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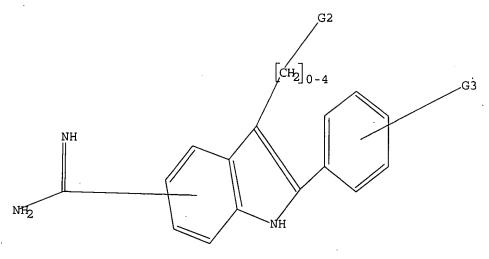
Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> Uploading 09868276.3 09868276.3

L1 STRUCTURE UPLOADED

=> d l1 L1 HAS NO ANSWERS

L1 STR



G1

G2 C, H, Cb, Ak, Cy

G3 X, CH2, OH, PhO, COOH, NH, NH2, P

Structure attributes must be viewed using STN Express query preparation.

Page 3

=> s 11

SAMPLE SEARCH INITIATED 12:05:07 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 61 TO ITERATE

100.0% PROCESSED 61 ITERATIONS 6 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 752 TO 1688

PROJECTED ANSWERS: 6 TO 266

L2 6 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 12:05:15 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 1062 TO ITERATE

100.0% PROCESSED 1062 ITERATIONS 119 ANSWERS

SEARCH TIME: 00.00.02

L3 119 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION

Patel <6/13/2003>

FULL ESTIMATED COST

148.55 148.76

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FILE COVERS 1907 - 13 Jun 2003 VOL 138 ISS 25 FILE LAST UPDATED: 12 Jun 2003 (20030612/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13

L4 19 L3

=> d l4 fbib hitstr abs total

- L4 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2003 ACS
- AN 2003:58259 CAPLUS
- DN 138:117652
- TI 2-[5-(5-carbamimidoyl-1H-heteroaryl)-6-hydroxybiphenyl-3-yl]succinic acid derivatives as factor VIIa inhibitors
- IN Hu, Huiyong; Kolesnikov, Aleksandr; Sperandio, David; Young, Wendy Beth; Shrader, William Dvorak
- PA Axys Pharmaceuticals, Inc., USA
- SO PCT Int. Appl., 43 pp. CODEN: PIXXD2
- DT Patent
- LA English

FAN.CNT 2

	PATENT NO.			KIND DATE			APPLICATION NO.					DATE						
DT													<del>-</del>		<b></b>			
ΡI	WO 2	2003	0066	70	A.	2	2003	0123		W	20	02-U	S213	40	2002	0703		
	WO 2	2003	0066	70	A.	A3 2003			030522									
		W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	ΑZ,	ΒA,	BB,	BG,	BR,	BY,	ΒZ,	CA,	CH,	CN,
			CO,	CR,	CU,	CZ,	DE,	DK,	.DM,	DZ,	EC,	EE,	ES,	FΙ,	GB,	GD,	GE,	GH,
			GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	ΚP,	KR,	KZ,	LC,	LK,	LR,
			LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	ΜZ,	NO,	NZ,	OM,	PH,
																	TT,	
			UA,	UG,	US,	UZ,	VN,	YU,	ZA,	ZM,	ZW,	AM,	ΑZ,	BY,	KG,	KZ,	MD,	RU,
			ТJ,	TM														•
		RW:	GH,	GM,	ΚE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AT,	BE,	BG,
																	MC,	
																	ML,	
					TD										~.	•	•	•

US 2001-303953PP 20010709 US 2002-351054PP 20020122

US 2001-303953PP 20010709 US 2002-351054PP 20020122

PATENT FAMILY INFORMATION:

FAN 2003:57897

	PATENT NO.				KIND DATE					APPLICATION NO. DATE								
ΡI	WO	2003	006011		A1		20030123			WO 2002-US21334 20020703								
		W:			-	-		-	-			-		•	BZ, GB,	-	•	•
			GM,	HR,	HU,	ID,	IL,	IN,	IS,	JΡ,	KE,	KG,	KP,	KR,	KZ,	LC,	LK,	LR,
															NO, TN,			
				UG,											KG,			
		RW:	GH,	GM,											ZW, IT,	-	-	-
			PT,		SK,	TR,									GQ,			

OS MARPAT 138:117652

IT 488713-56-0P 488713-61-7P 488791-84-0P 488792-03-6P 488792-04-7P

RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of succinic acid derivs. as anticoagulants)

RN 488713-56-0 CAPLUS

CN Butanedioic acid, [5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-nitro[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $H_2N-C$ 
 $H$ 

RN 488713-61-7 CAPLUS

CN Butanedioic acid, [5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-nitro[1,1'-biphenyl]-3-yl]-, dimethyl ester (9CI) (CA INDEX NAME)

. 09868276.3

Page 6

RN 488791-84-0 CAPLUS

CN Butanedioic acid, [5-[5-(aminoiminomethyl)-1H-indol-2-yl]-3'-chloro-6-hydroxy[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$CO_2H$$
 $CH-CH_2-CO_2H$ 
 $H_2N-C$ 
 $OH$ 
 $CI$ 

RN 488792-03-6 CAPLUS

CN Butanedioic acid, [3'-amino-5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$CO_2H$$
 $CH-CH_2-CO_2H$ 
 $NH_2$ 
 $NH_2$ 

RN 488792-04-7 CAPLUS

CN Butanedioic acid, [3'-[(aminocarbonyl)amino]-5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$CO_2H$$
 $CH-CH_2-CO_2H$ 
 $NH-C-NH_2$ 
 $NH-C-NH_2$ 

AB The present invention relates to derivs. of 2-[5-(5-carbamimidoyl-1H-heteroaryl)-6-hydroxybiphenyl-3-yl]succinic acid as inhibitors of Factors VIIa, IXa, Xa, XIa, in particular Factor VIIa, pharmaceutical compns. comprising these inhibitors, and methods for using these inhibitors for treating or preventing thromboembolic disorders. For example, 2-[5-(5-carbamimidoyl-1H-benzoimidazol-2-yl)-6-hydroxy-3'-nitro-biphenyl-3-yl]-succinic acid was prepd. by réaction of 2-(5-formyl-6-hydroxy-3'-nitro-biphenyl-3-yl)-succinic acid (0.3 g) and 3,4-diaminobenzamidine monohydrochloride (0.17 g) in a yield of 63%.

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L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2003 ACS
```

AN 2003:57897 CAPLUS

DN 138:122645

TI Preparation of 2-[5-(5-Carbamimidoyl-1H-heteroaryl)-6-hydroxybiphenyl-3-yl]-succinic acid derivatives as factor VIIa inhibitors

IN Hu, Huiyong; Kolesnikov, Aleksandr; Rai, Roopa; Shrader, William Dvorak; Young, Wendy Beth; Sperandio, David; Hendrix, John; Torkelson, Steve

PA Axys Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 97 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

							•										
	PATENT	KIND DATE				APPLICATION NO. DATE											
ΡI	PI WO 2003006011			A1 200301:			0123	WO 2002-US21334 20020						0703			
	W :	ΑE,	AG,	AL,	AM,	ΑT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,	CN,
		CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GE,	GH,
		GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KΕ,	KG,	ΚP,	KR,	KZ,	LC,	LK,	LR,
																OM,	
																TT,	
		UA,	UG,	US,	UZ,	VN,	YU,	ZA,	ZM,	ZW,	AM,	AZ,	BY,	KG,	KZ,	MD,	RU,
		TJ,	TM						•								
	RW:	GH,	GM,	KΕ,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	ΑT,	BE,	BG,
																MC,	
	•	PT,	SE,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,
		ΝE,	SN,	TD,	TG												
									US 2001-303953PP 20010709								

US 2001-303953PP 20010709 US 2002-351054PP 20020122

PATENT FAMILY INFORMATION:

FAN 2003:58259

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	WO 2003006670	A2	20030123	WO 2002-US21340	20020703
	WO 2003006670	A3	20030522		

Patel

09868276.3

## Page 8

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2001-303953PP 20010709 US 2002-351054PP 20020122

OS MARPAT 138:122645

IT 488713-61-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of [(carbamimidoyl-1H-

heteroaryl)hydroxybiphenylyl]succinic acid derivs. as factor VIIa inhibitors for treating thromboembolic disorders)

RN 488713-61-7 CAPLUS

CN Butanedioic acid, [5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-nitro[1,1'-biphenyl]-3-yl]-, dimethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & &$$

488713-56-0P, 2-[5-(5-Carbamimidoyl-1H-indol-2-yl)-6-hydroxy-3'-IT nitrobiphenyl-3-yl]succinic acid 488713-62-8P, 2-[5-(5-Carbamimidoyl-1H-indol-2-yl)-6,2'-dihydroxybiphenyl-3-yl]succinic acid 488713-63-9P, 2-[5-(5-Carbamimidoyl-6-chloro-1H-indol-2-yl)-6,2'-dihydroxybiphenyl-3-yl]succinic acid 488713-64-0P, (E) -2-[5-(5-Carbamimidoyl-1H-indol-2-yl)-5'-fluoro-6,2'-dihydroxybiphenyl-3-yl]but-2-enedioic acid 488713-65-1P, (Z)-2-[5-(5-Carbamimidoyl-1H-indol-2-yl)-5'-fluoro-6,2'-dihydroxybiphenyl-3-yl]but-2-enedioic acid 488713-77-5P, 2-[5-(5-Carbamimidoyl-1H-indol-2-yl)-2',6-dihydroxy-5'-aminocarbonylbiphenyl-3-yl]succinic acid RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (prepn. of [(carbamimidoyl-1H-heteroaryl)hydroxybiphenylyl]succinic acid derivs. as factor VIIa inhibitors for treating thromboembolic disorders)

RN 488713-56-0 CAPLUS

CN Butanedioic acid, [5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-

nitro[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CO}_2\text{H} \\ \text{CH-CH}_2\text{-CO}_2\text{H} \\ \text{H}_2\text{N-C} \\ \text{OH} \end{array}$$

RN 488713-62-8 CAPLUS

CN Butanedioic acid, [5-[5-(aminoiminomethyl)-1H-indol-2-yl]-2',6-dihydroxy[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$CO_2H$$
 $CH-CH_2-CO_2H$ 
 $OH$ 
 $OH$ 
 $OH$ 
 $OH$ 

RN 488713-63-9 CAPLUS

CN Butanedioic acid, [5-[5-(aminoiminomethyl)-6-chloro-1H-indol-2-yl]-2',6-dihydroxy[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$CO_2H$$
 $CH-CH_2-CO_2H$ 
 $OH$ 
 $OH$ 
 $OH$ 
 $OH$ 

RN 488713-64-0 CAPLUS

CN 2-Butenedioic acid, 2-[5-[5-(aminoiminomethyl)-1H-indol-2-yl]-5'-fluoro-2',6-dihydroxy[1,1'-biphenyl]-3-yl]-, (2E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

RN 488713-65-1 CAPLUS

CN 2-Butenedioic acid, 2-[5-[5-(aminoiminomethyl)-1H-indol-2-yl]-5'-fluoro-2',6-dihydroxy[1,1'-biphenyl]-3-yl]-, (2Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

$$H_{2}N$$
 $H_{2}N$ 
 $H_{3}N$ 
 $H_{4}N$ 
 $H_{5}N$ 
 $H$ 

RN 488713-77-5 CAPLUS

CN Butanedioic acid, [5'-(aminocarbonyl)-5-[5-(aminoiminomethyl)-1H-indol-2-yl]-2',6-dihydroxy[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

GΙ

AΒ The present invention relates to [I; X1-X4 = N, CR5 (wherein R5 = H, alkyl); provided that not more than three of X1-X4 are N; R1, R2 = H, alkyl, halo; R3 = CO2R9, -(alkylene)-CO2R9, CR8(CO2R11)alkylene-CO2R9, -C(R8)[(alkylene)nCO2R9]CH(R10)CO2R11 (wherein R8 = H, alkyl, HO; R10 = H, alkyl; R8 and R10 together forms a covalent bond; R9, R11 = H, alkyl, haloalkyl, aryl, aralkyl); R4 = H, alkyl, alkylthio, halo, HO, hydroxyalkyl, alkoxy, aminosulfonyl, alkylaminosulfonyl, dialkylaminosulfonyl, NO2; R6 = H, alkyl, halo; R7 = H, alkyl, cycloalkyl, alkylthio, halo, HO, NO2, cyano, alkoxy, haloalkoxy, CO2H, alkoxycarbonyl, acylamino, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, etc.; R13 = H, HO, C1-10 alkoxy, COR35 (wherein R35 = alkyl, aryl, haloalkyl, cyanoalkyl, alkoxycarbonyl, hydroxyalkoxycarbonyl, acyloxycarbonyl, haloalkoxycarbonyl)] and individual isomers, mixts. of isomers, or pharmaceutically acceptable salts thereof which are novel inhibitors of factors VIIa, IXa, Xa, XIa, in particular factor VIIa (no data). Also disclosed are pharmaceutical compns. contg. the compds. I for treating or preventing a disease mediated by factor VIIa, in particular thromboembolic disorders. Also claimed is a method for inhibiting coagulation of a biol. sample. Thus, A mixt. of 0.3 g 2-(5-formyl-6-hydroxy-3'-nitrobiphenyl-3yl) succinic acid, 0.17 g, 3,4-diaminobenzamidine monohydrochloride, and 0.097 g benzoquinone in 50 mL ethanol was heated for approx. 4 h to give, after purifn. by reverse phase HPLC (gradient, acetonitrile/0.02 N aq. HCl) to give 63% 2-[5-(5-carbamimidoyl-1H-benzimidazol-2-yl)-6-hydroxy-3'nitrobiphenyl-3-yl]succinic acid.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2002:680206 CAPLUS

DN 137:365440

- TI Contribution of Multicentered Short Hydrogen Bond Arrays to Potency of Active Site-Directed Serine Protease Inhibitors
- AU Katz, Bradley A.; Spencer, Jeffrey R.; Elrod, Kyle; Luong, Christine; Mackman, Richard L.; Rice, Mark; Sprengeler, Paul A.; Allen, Darin; Janc, James
- CS Celera, South San Francisco, CA, 94080, USA
- SO Journal of the American Chemical Society (2002), 124(39), 11657-11668 CODEN: JACSAT; ISSN: 0002-7863
- PB American Chemical Society

DT Journal

LA English

IT 277312-42-2D, CRA 8696, complexes with enzymes

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(multicentered short hydrogen bond arrays may contribute to potency of active site-directed serine protease inhibitors)

RN 277312-42-2 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy[1,1'-biphenyl]-3-yl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} H & \\ H_2N - C & \\ NH & \\ \end{array}$$

AB We describe and compare the pH dependencies of the potencies and of the bound structures of two inhibitor isosteres that form multicentered short hydrogen bond arrays at the active sites of trypsin, thrombin, and urokinase type plasminogen activator (urokinase or uPA) over certain ranges of pH. Depending on the pH, short hydrogen bond arrays at the active site are mediated by two waters, one in the oxyanion hole (H2Ooxy) and one on the other (S2) side of the inhibitor (H2OS2), by one water (H2Ooxy), or by no water. The dramatic variation in the length of the active site hydrogen bonds as a function of pH, of inhibitor, and of enzyme, along with the involvement or absence of ordered water, produces a large structural manifold of active site hydrogen bond motifs. Diverse examples of multicentered and two-centered short hydrogen bond arrays, both at and away from the active site, recently discovered in several protein crystal systems; suggest that short hydrogen bonds in proteins may be more common than has been recognized. The short hydrogen bond arrays resemble one another with respect to ionic nature, highly polar environment, multitude of assocd. ordinary hydrogen bonds, and disparate pKa values of participating groups. Comparison of structures and Ki values of trypsin complexes at pH values where the multicentered short hydrogen bond arrays mediating inhibitor binding are present or absent indicate that these arrays have a minor effect on inhibitor potency. These features suggest little covalent nature within the short hydrogen bonds, despite their extraordinary shortness (as short as 2.0 .ANG.).

RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2002:510523 CAPLUS

DN 138:162956

TI 2-(2-Hydroxy-3-alkoxyphenyl)-1H-benzimidazole-5-carboxamidine derivatives as potent and selective urokinase-type plasminogen activator inhibitors

AU Mackman, Richard L.; Hui, Hon C.; Breitenbucher, J. Guy; Katz, Bradley A.; Luong, Christine; Martelli, Arnold; McGee, Danny; Radika, Kesavan; Sendzik, Martin; Spencer, Jeffrey R.; Sprengeler, Paul A.; Tario, James; Verner, Erik; Wang, Jing

CS Celera, South San Francisco, CA, 94080, USA

SO Bioorganic & Medicinal Chemistry Letters (2002), 12(15), 2019-2022

Patel

CODEN: BMCLE8; ISSN: 0960-894X

PB Elsevier Science Ltd.

DT Journal

LA English

OS CASREACT 138:162956

IT 497147-73-6P 497147-74-7P 497147-75-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug design for potent and selective urokinase-type plasminogen activator inhibitors)

RN 497147-73-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-ethoxy-2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

RN 497147-74-7 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-3-(2-methylpropoxy)phenyl]-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} H \\ N \\ OBu-i \end{array}$$

RN 497147-75-8 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[3-(cyclopentyloxy)-2-hydroxyphenyl]- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 OH OH

## IT 497147-72-5

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (drug design for potent and selective urokinase-type plasminogen

activator inhibitors)

497147-72-5 CAPLUS

RN

CN

```
INDEX NAME)
                            OPh
     NH
AB
     The development of potent and selective urokinase-type plasminogen
     activator (uPA) inhibitors based on the lead mol. 2-(2-hydroxy-3-
     ethoxyphenyl)-1H-benzimidazole-5-carboxamidine is described.
RE.CNT 22
               THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT
L4
     ANSWER 5 OF 19 CAPLUS COPYRIGHT 2003 ACS
     2002:142700 CAPLUS
AN
DN
     136:183829
TI
     Preparation of azolylbiphenylylindolecarboxamidines Factor VIIa inhibitors
IN
     Leahy, Ellen M.
PA
     Axys Pharmaceuticals, Inc., USA
     PCT Int. Appl., 21 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     English
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                              APPLICATION NO. DATE
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                                             -----
                       A1 20020221
PI
     WO 2002014307
                                             WO 2001-US25324 20010811
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
             HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
             YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                                              US 2000-224713PP 20000811
     US 2002037912
                              20020328
                        A1
                                              US 2001-927423
                                                              20010810
                                              US 2000-224713PP 20000811
     AU 2001083340
                        Α5
                              20020225
                                              AU 2001-83340
                                                                20010811
                                              US 2000-224713PP 20000811
                                              WO 2001-US25324W 20010811
OS
     MARPAT 136:183829
IT
     381210-39-5P 400008-32-4P 400008-33-5P
     400008-34-6P 400008-35-7P 400008-36-8P
     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
        (prepn. of azolylbiphenylindolecarboxamidines as Factor VIIa
        inhibitors)
RN
     381210-39-5 CAPLUS
```

1H-Indole-5-carboximidamide, 2-(2-hydroxy-3-phenoxyphenyl)- (9CI)

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-3'-nitro-5-(1H-tetrazol-5-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $H_2N-C$ 
 $H$ 

RN 400008-32-4 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-5-(1H-tetrazol-5-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

RN 400008-33-5 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-3'-nitro-5-(1H-tetrazol-5-ylmethyl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $H_2N-C$ 
 $H$ 

RN 400008-34-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-5-(1H-tetrazol-5-ylmethyl)[1,1'-

biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

RN 400008-35-7 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-5-(1H-1,2,3-triazol-4-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

RN 400008-36-8 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-5-(1H-tetrazol-1-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

GΙ

AΒ Title compds. [I; R1 = OH; R2 = Ph, nitrophenyl; R3, R5, R8, R9 = H; R4 = (CH2)0-2-tetrazolyl, (CH2)0-2-triazolyl; R6 = H, CH2Ph; R7 = amino, amidino, guanidino], were prepd. as antithrombotics (no data). 1-[3-Bromo-2-hydroxy-5-(1H-tetrazol-5-yl)phenyl]ethanone, 3-nitrophenylboronic acid, Na2CO3, and Pd(PPh3)4 were refluxed 8-16 h in EtOH/PhMe/H2O to give 100% 1-[2-hydroxy-3-nitro-5-(1H-tetrazol-5yl)biphenyl-3-yl]ethanone. The latter was refluxed with 4-hydrazinobenzamidine and diisopropylethylamine in EtOH for 8-16 h to give a hydrazone which was heated in polyphosphoric acid at 165.degree. for 1 h to give 3% 2-[2-hydroxy-3-nitro-5-(1H-tetrazol-5-yl)biphenyl-3-yl]-1H-indole-5-carboxamidine.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4ANSWER 6 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2002:142669 CAPLUS

DN 136:200191

Preparation of 2-(3-tetrazolyl or 3-triazolylphenyl)indoles as selective ΤI urokinase inhibitors

Mackman, Richard L. ΙN

PAAxys Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 18 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.	CNT 1											
	PATENT	NO.	KIND DA	ATE	APPLICATION NO. DATE							
PΙ	WO 2002	014274	A1 20	0020221	WO 2001-US25315	20010811						
	W :	AE, AG,	AL, AM, A	AT, AU, AZ,	BA, BB, BG, BR, BY	, BZ, CA, CH, CN,						
					EE, ES, FI, GB, GD							
		HU, ID,	IL, IN, I	IS, JP, KE,	KG, KP, KR, KZ, LC	, LK, LR, LS, LT,						
		LU, LV,	MA, MD, M	MG, MK, MN,	MW, MX, MZ, NO, NZ	, PL, PT, RO, RU,						
		SD, SE,	SG, SI, S	SK, SL, TJ,	TM, TR, TT, TZ, UA	, UG, US, UZ, VN,						
		YU, ZA,	ZW, AM, A	AZ, BY, KG,	KZ, MD, RU, TJ, TM							
	RW:	GH, GM,	KE, LS, M	MW, MZ, SD,	SL, SZ, TZ, UG, ZW	, AT, BE, CH, CY,						
		DE, DK,	ES, FI, F	FR, GB, GR,	IE, IT, LU, MC, NL	, PT, SE, TR, BF,						
		BJ, CF,	CG, CI, C	CM, GA, GN,	GQ, GW, ML, MR, NE	, SN, TD, TG						
					US 2000-224712PP	20000811						
	US 2002045650		A1 20	0020418	US 2001-927785	20010810						
	US 6465503		B2 20	0021015								
					US 2000-224712PP	20000811						
	AU 2001083336		A5 20	0020225	AU 2001-83336	20010811						
				•	US 2000-224712PP	20000811						
					WO 2001-US25315W	20010811						

OS MARPAT 136:200191

IT 400781-28-4P 400781-29-5P 400781-30-8P

400781-31-9P 400781-32-0P 400781-33-1P

400781-34-2P 400781-35-3P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of 2-(3-tetrazolyl or 3-triazolylphenyl)indoles as selective urokinase inhibitors)

RN 400781-28-4 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-chloro-2-[2-hydroxy-3'-nitro-5-(1H-tetrazol-5-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} O_2N \\ HO \\ H_2N - C \\ NH \end{array}$$

RN 400781-29-5 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-chloro-2-[2-hydroxy-5-(1H-tetrazol-5-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$H_2N$$
 $C1$ 
 $H_2N$ 
 $OH$ 
 $OH$ 

RN 400781-30-8 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-fluoro-2-[2-hydroxy-5-(1H-tetrazol-5-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & N & N \\ & HN & N \\ & HN & N \\ & H_2N - C & OH \\ & NH & OH \\ \end{array}$$

RN 400781-31-9 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-fluoro-2-[2-hydroxy-3'-nitro-5-(1H-tetrazol-5-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & & \\ & & & & \\ H_2N-C & & & \\ & & & \\ NH & & & \\ \end{array}$$

RN 400781-32-0 CAPLUS

CN lH-Indole-5-carboximidamide, 6-chloro-2-[2-hydroxy-3'-nitro-5-(1H-1,2,3-triazol-4-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{C1} & \text{HO} & \text{H} \\ \text{H}_{2}\text{N} - \text{C} & \text{N} \\ \text{NH} & \text{NH} \end{array}$$

RN 400781-33-1 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-chloro-2-[2-hydroxy-5-(1H-1,2,3-triazol-4-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

09868276.3

Page 20

$$\begin{array}{c|c} & N & N \\ \hline & N \\ & NH \\ \hline & NH \\ & NH \\ \end{array}$$

RN 400781-34-2 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-fluoro-2-[2-hydroxy-5-(1H-1,2,3-triazol-4-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{N} \\ \text{$$

RN 400781-35-3 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-fluoro-2-[2-hydroxy-3'-nitro-5-(1H-1,2,3-triazol-4-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

GI

AB The title compds. [I; R1 = OH; R2 = Ph, nitrophenyl; R3 = H; R4 = (CH2)0-2tetrazolyl, (CH2)0-2triazolyl; R5 = H; R6 = H; R7 = NH2, amidino, guanidino; R8 = halo; R9 = H] which are inhibitors of uPA (no data), and have utility as cancer treating agents, were prepd. E.g., a 3-step synthesis of I [R1 = OH: 3-NO2C6H4; R3 = H; R4 = 1H-tetrazol-5-yl; R5, R6 = H; R7 = C(:NH)NH2; R8 = Cl; R9 = H], starting with 1-[3-bromo-2-hydroxy-5-(1H-tetrazol-5-yl)phenyl]ethanone, was given.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

Ι

L4 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2001:866569 CAPLUS

DN 136:395308

TI Engineering inhibitors highly selective for the S1 sites of Ser190 trypsin-like serine protease drug targets

AU Katz, Bradley A.; Sprengeler, Paul A.; Luong, Christine; Verner, Erik; Elrod, Kyle; Kirtley, Matt; Janc, James; Spencer, Jeffrey R.; Breitenbucher, J. Guy; Hui, Hon; McGee, Danny; Allen, Darin; Martelli, Arnold; Mackman, Richard L.

CS Axys Pharmaceutical Corporation, South San Francisco, CA, 94080, USA

SO Chemistry & Biology (2001), 8(11), 1107-1121 CODEN: CBOLE2; ISSN: 1074-5521

PB Elsevier Science Ltd.

DT Journal

LA English

IT 277312-21-7, APC 10302 277312-33-1, APC 9008 277312-42-2, APC 8696 277312-54-6, APC 9850 277312-62-6, APC 11417

RL: PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)

(APC-7806 (benzimidazole) and APC-8696 (indole) series inhibitors highly selective for S1 sites of Ser190 trypsin-like serine protease drug targets and their structure-activity relationship)

RN 277312-21-7 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-chloro-2-(2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

RN 277312-33-1 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3,5-dichloro-2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

RN 277312-42-2 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy[1,1'-biphenyl]-3-yl)- (9CI) (CA INDEX NAME)

$$H_2N-C$$
  $OH$   $OH$   $OH$ 

RN 277312-54-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-chloro-2-(3,5-dichloro-2-hydroxyphenyl)-(9CI) (CA INDEX NAME)

RN 277312-62-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-fluoro-2-(2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

AB Background: Involved or implicated in a wide spectrum of diseases, trypsin-like serine proteases comprise well studied drug targets and anti-targets that can be subdivided into two major classes. In one class there is a serine at position 190 at the S1 site, as in urokinase type plasminogen activator (urokinase or uPA) and factor VIIa, and in the other there is an alanine at 190, as in tissue type plasminogen activator (tPA) and factor Xa. A hydrogen bond unique to Ser190 protease-arylamidine complexes between O.gamma. Ser190 and the inhibitor amidine confers an intrinsic preference for such inhibitors toward Ser190 proteases over Ala190 counterparts. Results: Based on the structural differences between the S1 sites of Ser190 and Ala190 protease-arylamidine complexes, we amplified the selectivity of amidine inhibitors toward uPA and against tPA, by factors as high as 220-fold, by incorporating a halo group ortho to the amidine of a lead inhibitor scaffold. Comparison of Ki values of such halo-substituted and parent inhibitors toward a panel of Ser190 and Ala190 proteases demonstrates pronounced selectivity of the halo analogs for Ser190 proteases over Ala190 counterparts. Crystal structures of Ser190 proteases, uPA and trypsin, and of an Ala190 counterpart, thrombin, bound by a set of ortho (halo, amidino) aryl inhibitors and of non-halo parents reveal the structural basis of the exquisite selectivity and validate the design principle. Conclusions: Remarkable selectivity enhancements of exceptionally small inhibitors are achieved toward the uPA target over the highly similar tPA anti-target through a single atom substitution on an otherwise relatively non-selective scaffold. Overall selectivities for uPA over tPA as high as 980-fold at physiol. pH were realized. The increase in selectivity results from the displacement of a single bound water mol. common to the S1 site of both the uPA target and the tPA anti-target because of the ensuing deficit in hydrogen bonding of the arylamidine inhibitor when bound in the Ala190 protease anti-target.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2001:731858 CAPLUS

DN 136:31297

- TI Exploiting Subsite S1 of Trypsin-Like Serine Proteases for Selectivity: Potent and Selective Inhibitors of Urokinase-Type Plasminogen Activator
- AU Mackman, Richard L.; Katz, Bradley A.; Breitenbucher, J. Guy; Hui, Hon C.; Verner, Erik; Luong, Christine; Liu, Liang; Sprengeler, Paul A.
- CS Departments of Medicinal Chemistry Structural Biology and Preclinical Sciences, Axys Pharmaceuticals Inc., South San Francisco, CA, 94080, USA
- SO Journal of Medicinal Chemistry (2001), 44(23), 3856-3871 CODEN: JMCMAR; ISSN: 0022-2623
- PB American Chemical Society
- DT Journal
- LA English
- IT 277312-21-7P
  - RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); SPN (Synthetic preparation); THU

Patel <6/13/2003>

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(exploiting subsite S1 of trypsin-like serine proteases for selectivity to design potent and selective inhibitors of urokinase-type plasminogen activators in relation to pharmacokinetics)

RN 277312-21-7 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-chloro-2-(2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

## IT 277312-62-6P 380241-57-6P 380241-87-2P 380241-89-4P

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(exploiting subsite S1 of trypsin-like serine proteases for selectivity to design potent and selective inhibitors of urokinase-type plasminogen activators in relation to pharmacokinetics)

RN 277312-62-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-fluoro-2-(2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} F & H \\ \hline H_2N - C & OH \\ \hline NH & OH \\ \end{array}$$

RN 380241-57-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 4-chloro-2-(2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

RN 380241-87-2 CAPLUS

CN lH-Indole-5-carboximidamide, 6-hydroxy-2-(2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

09868276.3

RN 380241-89-4 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy[1,1'-biphenyl]-3-yl)-6-methyl-(9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} & \overset{H}{\underset{NH}{\text{NH}}} \\ \text{Ph} \\ \end{array}$$

IT 277312-42-2

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (exploiting subsite S1 of trypsin-like serine proteases for selectivity to design potent and selective inhibitors of urokinase-type plasminogen activators in relation to pharmacokinetics)

RN 277312-42-2 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy[1,1'-biphenyl]-3-yl)- (9CI) (CA INDEX NAME)

$$H_2N$$
 OH OH

IT 380241-85-0P

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(exploiting subsite S1 of trypsin-like serine proteases for selectivity to design potent and selective inhibitors of urokinase-type plasminogen activators in relation to pharmacokinetics)

RN 380241-85-0 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy[1,1'-biphenyl]-3-yl)-6-methoxy-(9CI) (CA INDEX NAME)

AB A nonselective inhibitor of trypsin-like serine proteases, 2-(2-hydroxybiphenyl-3-yl)-1H-indole-5-carboxamidine (I) (Verner, E.; Katz, B. A.; Spencer, J.; Allen, D.; Hataye, J.; Hruzewicz, W.; Hui, H. C.; Kolesnikov, A.; Li, Y.; Luong, C.; Martelli, A.; Radika. K.; Rai, R.; She, M.; Shrader, W.; Sprengeler, P. A.; Trapp, S.; Wang, J.; Young, W. B.; Mackman, R. L. J. Med. Chem. 2001, 44, 2753-2771) has been optimized through minor structural changes on the S1 binding group to afford remarkably selective and potent inhibitors of urokinase-type plasminogen activator (uPA). The trypsin-like serine proteases1 that comprise drug targets can be broadly categorized into two subfamilies, those with Ser190 and those with Ala190. A single-atom modification, for example, replacement of hydrogen for chlorine at the 6-position of the 5-amidinoindole P1 group on I, generated .ltoreq.6700-fold selectivity toward the Ser190 enzymes and against the Ala190 enzymes. The larger chlorine atom displaces a water mol. (H2O1S1) that binds near residue 190 in all the complexes of I, and related inhibitors, in uPA, thrombin, and trypsin. The water mol., H201S1, in both the Ser190 or Ala190 enzymes, hydrogen bonds with the amidine N1 nitrogen of the inhibitor. When it is displaced, a redn. in affinity toward the Ala190 enzymes is obsd. due to the amidine N1 nitrogen of the bound inhibitor being deprived of a key hydrogen-bonding partner. In the Ser190 enzymes the affinity is maintained since the serine hydroxyl oxygen O.gamma. Ser190 compensates for the displaced water mol. High-resoln. crystallog. provided evidence for the displacement of the water mol. and validated the design rationale. In summation, a novel and powerful method for engineering selectivity toward Ser190 proteases and against Ala190 proteases without substantially increasing mol. wt. is described.

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2003 ACS
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AN 2001:628981 CAPLUS

DN 136:47957

TI Optimization of a screening lead for factor VIIa/TF

AU Young, W. B.; Kolesnikov, A.; Rai, R.; Sprengeler, P. A.; Leahy, E. M.; Shrader, W. D.; Sangalang, J.; Burgess-Henry, J.; Spencer, J.; Elrod, K.; Cregar, L.

CS Departments of Medicinal Chemistry, Structural Chemistry, and Enzymology, Axys Pharmaceuticals, Inc., South San Francisco, CA, 94080, USA

SO Bioorganic & Medicinal Chemistry Letters (2001), 11(17), 2253-2256 CODEN: BMCLE8; ISSN: 0960-894X

PB Elsevier Science Ltd.

DT Journal

LA English

IT 381210-27-1P 381210-28-2P 381210-29-3P 381210-30-6P 381210-31-7P 381210-32-8P 381210-33-9P 381210-34-0P 381210-35-1P 381210-36-2P 381210-37-3P 381210-38-4P 381210-39-5P

Patel ·

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(structure based design of an indole biphenyl inhibitor of factor VIIa/TF with improved selectivity vs. related enzymes)

RN 381210-27-1 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 3'-amino-5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy- (9CI) (CA INDEX NAME)

$$HO_2C$$
— $CH_2$ 
 $H_2N$ — $OH$ 
 $NH_2$ 

RN 381210-28-2 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy- (9CI) (CA INDEX NAME)

RN 381210-29-3 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 5-[5-(aminoiminomethyl)-1H-indol-2-yl]-3'-chloro-6-hydroxy- (9CI) (CA INDEX NAME)

$$HO_2C-CH_2$$
 $H_2N-C$ 
 $OH$ 
 $OH$ 

RN 381210-30-6 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-nitro- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{HO}_2\text{C} - \text{CH}_2 \\ & \text{H}_2\text{N} - \text{C} \\ & \text{NH} \end{array}$$

RN 381210-31-7 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 5-[5-(aminoiminomethyl)-1H-indol-2-yl]-3'-carboxy-6-hydroxy- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{HO}_2\text{C}-\text{CH}_2 \\ & \text{H}_2\text{N}-\text{C} \\ & \text{NH} \end{array}$$

RN 381210-32-8 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-(phosphonooxy)- (9CI) (CA INDEX NAME)

$$HO_2C-CH_2$$
 $H_2N-C$ 
 $OPO_3H_2$ 

RN 381210-33-9 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-(1H-tetrazol-5-yl)- (9CI) (CA INDEX NAME)

RN 381210-34-0 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 3'-(aminoiminomethyl)-5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{HO}_2\text{C-CH}_2 \\ & \text{H}_2\text{N-C} \\ & \text{NH} \end{array}$$

RN 381210-35-1 CAPLUS

CN [1,1'-Biphenyl]-3-carboxylic acid, 5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-nitro- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $OH$ 
 $OH$ 
 $NO_2$ 

RN 381210-36-2 CAPLUS

CN [1,1'-Biphenyl]-3-propanoic acid, 5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-nitro- (9CI) (CA INDEX NAME)

$$HO_2C-CH_2-CH_2$$
 $H_2N-C$ 
 $OH$ 
 $NO_2$ 

RN 381210-37-3 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-3'-nitro-5-[2-(phosphonooxy)ethyl][1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

09868276.3

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$$H_2O_3PO-CH_2-CH_2$$
 $H_2N-C$ 
 $OH$ 
 $NO_2$ 

RN 381210-38-4 CAPLUS

CN [1,1'-Biphenyl]-3-propanoic acid, .alpha.-amino-5-[5-(aminoiminomethyl)-1H-indol-2-yl]-6-hydroxy-3'-nitro- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{NH}_2 \\ & \text{HO}_2\text{C}-\text{CH}-\text{CH}_2 \\ & \text{H}_2\text{N}-\text{C} \\ & \text{OH} \end{array}$$

RN 381210-39-5 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-3'-nitro-5-(1H-tetrazol-5-yl)[1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ H_2N - C & & & \\ & & & \\ NH & & & \\ \end{array}$$

GI .

AB The structure-based design and progression of a screening lead (I, R = Cl, Rl = NH2) to a 3 nM factor VIIa/TF inhibitor I, (R = CH2CO2H, R1 = NO2) with improved selectivity vs. related enzymes is described.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2001:518599 CAPLUS

DN 135:313147

TI Development of potent and selective factor Xa inhibitors

AU Rai, R.; Kolesnikov, A.; Li, Y.; Young, W.; Leahy, E.; Sprengeler, P.; Verner, E.; Shrader, W.; Burgess-Henry, J.; Sangalang, J.; Allen, D.; Chen, X.; Katz, B.; Luong, C.; Elrod, K.; Cregar, L.

CS Departments of Medicinal Chemistry, Structural Chemistry and Enzymology, Axys Pharmaceuticals, Inc., South San Francisco, CA, 94080, USA

SO Bioorganic & Medicinal Chemistry Letters (2001), 11(14), 1797-1800 CODEN: BMCLE8; ISSN: 0960-894X

PB Elsevier Science Ltd.

DT Journal

LA English

IT 277312-22-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(development of potent and selective factor Xa inhibitors in relation to inhibition of thrombin)

RN 277312-22-8 CAPLUS

CN Benzeneacetic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $CH_2-Ph$ 
 $CH_2-Ph$ 

## IT 277312-31-9

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)

(development of potent and selective factor Xa inhibitors in relation to inhibition of thrombin)

RN 277312-31-9 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-methylphenyl) - (9CI) (CA INDEX NAME)

IT 277312-23-9P 277312-32-0P 277312-41-1P 277312-48-8P 277312-51-3P 277312-53-5P 277312-74-0P 277312-82-0P 277312-84-2P 277312-85-3P 277312-86-4P 368878-92-6P 368878-93-7P 368878-94-8P 368878-95-9P 368878-96-0P 368878-97-1P 368878-98-2P 368878-99-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(development of potent and selective factor Xa inhibitors in relation to inhibition of thrombin)

RN 277312-23-9 CAPLUS

CN Benzenepropanoic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $CH_2-CH_2-CO_2H$ 
 $CH_2-Ph$ 

RN 277312-32-0 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-chloro-2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

09868276.3

Page 33

$$\begin{array}{c} & & \text{HO} \\ & \text{H} \\ \text{H} \\ \text{NH} \end{array}$$

RN 277312-41-1 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-5-methyl[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Ph} \\ \text{HO} \\ \text{H} \\ \text{NH} \end{array}$$

RN 277312-48-8 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-3,5-dimethylphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{Ho} \\ \text{H}_2 \text{N} - C \\ \text{NH} \end{array}$$

RN 277312-51-3 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $NH$ 
 $H_2N-C$ 
 $OH$ 

RN 277312-53-5 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-methylphenyl)-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Br} \\ \text{HO} \\ \text{H} \\ \text{NH} \end{array}$$

RN 277312-74-0 CAPLUS

CN Benzeneacetic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy-, methyl ester (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $H_2N-C$ 
 $CH_2-C$ 
 $C$ 

RN 277312-82-0 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[3-bromo-2-hydroxy-5-[2-(phosphonooxy)ethyl]phenyl]-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ H_2N-C & & \\ H_2N-C & & \\ & & \\ NH & & \\ \end{array}$$

RN 277312-84-2 CAPLUS

CN Benzenebutanoic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $CH_2-Ph$ 
 $CH_2-Ph$ 

RN 277312-85-3 CAPLUS

CN Benzeneacetamide, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ H_2N-C & & \\ & & \\ NH & & \\ \end{array}$$

RN 277312-86-4 CAPLUS

CN Benzeneacetamide, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy-N,N-dimethyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ H_2N-C & & & \\ \parallel & & \\ NH & & \\ \end{array}$$

RN 368878-92-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-methylphenyl)-3-(2-phenylethyl)- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $CH_2-CH_2-Ph$ 

RN 368878-93-7 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-methylphenyl)-3-(3-phenylpropyl)- (9CI) (CA INDEX NAME)

$$_{\mathrm{H_2N-C}}^{\mathrm{HO}}$$
  $_{\mathrm{NH}}^{\mathrm{HO}}$   $_{\mathrm{NH}}^{\mathrm{HO}}$   $_{\mathrm{CH_2)}}^{\mathrm{HO}}$   $_{\mathrm{3-Ph}}^{\mathrm{HO}}$ 

RN 368878-94-8 CAPLUS

CN Benzoic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy-(9CI) (CA INDEX NAME)

$$H_2N-C$$
 $CH_2-Ph$ 
 $CH_2-Ph$ 

RN 368878-95-9 CAPLUS

CN Benzeneacetic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy-.alpha.,.alpha.-dimethyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{Me} \\ & \text{Me} \\ \hline \\ \text{Me} \\ \hline \\ \text{C} \\ \text{CO}_2 \\ \text{H} \\ \\ \text{NH} \\ \end{array}$$

RN 368878-96-0 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[3-bromo-2-hydroxy-5-(1H-tetrazol-5-yl)phenyl]-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ H_2N-C & & \\ & & \\ & & \\ NH & & \\$$

RN 368878-97-1 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[3-bromo-2-hydroxy-5-(1H-tetrazol-5-ylmethyl)phenyl]-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ H_2N-C & & \\ & & & \\ & & & \\$$

RN 368878-98-2 CAPLUS

CN Benzenepropanoic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-methoxy- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Br} \\ \text{MeO} \\ \text{H} \\ \text{NH} \end{array}$$
 
$$\text{CH}_2 - \text{CH}_2 - \text{CO}_2 \text{H}$$

RN 368878-99-3 CAPLUS

CN Benzenepropanoic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo- (9CI) (CA INDEX NAME)

$$HO_2C-CH_2-CH_2$$
 $H_2N-C$ 
 $CH_2-Ph$ 
 $NH$ 

AB The development of potent and selective small mol. inhibitors of factor Xa is described. Inhibition of thrombin and crystal structure of several of the compds. complexed with thrombin is also described. The compds. showed anticoagulant activity. The synthesis of the phenylindolecarboxamide compds. is illustrated.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2001:500142 CAPLUS

DN 135:235905

TI Development of serine protease inhibitors displaying a multicentered short (<2.3 .ANG.) hydrogen bond binding mode: Inhibitors of urokinase-type plasminogen activator and factor Xa

AU Verner, Erik; Katz, Bradley A.; Spencer, Jeffrey R.; Allen, Darin; Hataye, Jason; Hruzewicz, Witold; Hui, Hon C.; Kolesnikov, Aleksandr; Li, Yong; Luong, Christine; Martelli, Arnold; Radika, Kesavan; Rai, Roopa; She, Miles; Shrader, William; Sprengeler, Paul A.; Trapp, Sean; Wang, Jing; Young, Wendy B.; Mackman, Richard L.

CS Departments of Medicinal Chemistry Structural Biology and Biochemistry and Enzymology, Axys Pharmaceuticals Inc., South San Francisco, CA, 94080, USA

SO Journal of Medicinal Chemistry (2001), 44(17), 2753-2771 CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

IT 277312-31-9P 277312-40-0P 277312-41-1P 277312-42-2P 277312-44-4P 360791-79-3P 360791-81-7P 360791-83-9P 360791-85-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and biol. activity of serine protease inhibitors displaying a multicentered short (<2.3 .ANG.) hydrogen bond binding mode and inhibitors of urokinase-type plasminogen activator and factor Xa)

RN 277312-31-9 CAPLUS

CN lH-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

RN 277312-40-0 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3,5-dibromo-2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

RN 277312-41-1 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-5-methyl[1,1'-biphenyl]-3-yl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Ph} \\ \text{Ho} \\ \text{H}_2 \text{N-C} \\ \\ \text{NH} \end{array}$$

RN 277312-42-2 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy[1,1'-biphenyl]-3-yl)- (9CI) (CA INDEX NAME)

RN 277312-44-4 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-nitrophenyl)- (9CI) (CA INDEX NAME)

RN 360791-79-3 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

RN 360791-81-7 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(5-bromo-2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

RN 360791-83-9 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(5-chloro-2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

Page 41

RN 360791-85-1 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-5-nitro[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

IT 179748-10-8P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. and biol. activity of serine protease inhibitors displaying a multicentered short (<2.3 .ANG.) hydrogen bond binding mode and inhibitors of urokinase-type plasminogen activator and factor Xa)

RN 179748-10-8 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{HO} \\ \text{H} \\ \text{NH} \end{array}$$

AB. Novel scaffolds that bind to serine proteases through a unique network of short hydrogen bonds to the catalytic Ser195 have been developed. The resulting potent serine protease inhibitors were designed from lead mol. 2-(2-hydroxyphenyl)1H-benzoimidazole-5-carboxamidine, 6b, which is known to display several modes of binding. For instance, 6b can recruit zinc and bind in a manner similar to that reported by bis(5-amidino-2-benzimidazolyl)methane (BABIM) (Nature 1998, 391, 608-612). Alternatively, 6b can bind in the absence of zinc through a multicentered network of short (<2.3 .ANG.) hydrogen bonds. The lead structure was optimized in the zinc-independent binding mode toward a panel of six human serine proteases to yield optimized inhibitors such as 2-(3-bromo-2-hydroxy-5-methylphenyl)-1H-indole-5-carboxamidine, 22a, and

09868276.3 Page 42

2-(2-hydroxybiphenyl-3-yl)-1H-indole-5-carboxamidine, 22f. Structure-activity relationships detd. that, apart from the amidine function, an indole or benzimidazole and an ortho substituted phenol group were also essential components for optimal potency. The affinities (Ki) of 22a and 22f, for example, bearing these groups ranged from 8 to 600 nM toward a panel of six human serine proteases. High-resoln. crystal structures revealed that the binding mode of these mols. in several of the enzymes was identical to that of 6b and involved short (<2.3 .ANG.) hydrogen bonds among the inhibitor hydroxyl oxygen, Ser195, and a water mol. trapped in the oxyanion hole. In summation, novel and potent trypsin-like serine protease inhibitors possessing a unique mode of binding have been discovered.

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2001:456650 CAPLUS

DN 135:195528

TI Amidino benzimidazole inhibitors of bacterial two-component systems

AU Weidner-Wells, M. A.; Ohemeng, K. A.; Nguyen, V. N.; Fraga-Spano, S.; Macielag, M. J.; Werblood, H. M.; Foleno, B. D.; Webb, G. C.; Barrett, J. F.; Hlasta, D. J.

CS Drug Discovery, The R. W. Johnson Pharmaceutical Research Institute, Raritan, NJ, 08869, USA

SO Bioorganic & Medicinal Chemistry Letters (2001), 11(12), 1545-1548 CODEN: BMCLE8; ISSN: 0960-894X

PB Elsevier Science Ltd.

DT Journal

LA English

OS CASREACT 135:195528

IT 357156-54-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(prepn. and antibacterial activity of amidino benzimidazole and benzoxazole inhibitors of bacterial two-component systems)

RN 357156-54-8 CAPLUS

CN 1H-Indole-6-carboximidamide, 2-(4-phenoxyphenyl)- (9CI) (CA INDEX NAME)

GI

Patel

AB Amidino benzimidazoles, such as I (R = C6H4-4-OPh), were identified as inhibitors of the bacterial KinA/SpoOF two-component system (TCS). Many of these inhibitors exhibit good in vitro antibacterial activity against a variety of susceptible and resistant Gram-pos. organisms. The moiety at the 2-position of the benzimidazole was extensively modified. In addn., the regioisomeric benzoxazoles II [R = C6H4-4-OPh, C6H2-2-OH-3,5-(CMe3)2], heterocyclic replacements for the benzimidazole, were synthesized and their activity against the TCS evaluated.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2001:246441 CAPLUS

DN 135:89065

TI A Novel Serine Protease Inhibition Motif Involving a Multi-centered Short Hydrogen Bonding Network at the Active Site

AU Katz, Bradley A.; Elrod, Kyle; Luong, Christine; Rice, Mark J.; Mackman, Richard L.; Sprengeler, Paul A.; Spencer, Jeffrey; Hataye, Jason; Janc, James; Link, John; Litvak, Joane; Rai, Roopa; Rice, Ken; Sideris, Steve; Verner, Erik; Young, Wendy

CS Axys Pharmaceuticals Corporation, South San Francisco, CA, 94080, USA

SO Journal of Molecular Biology (2001), 307(5), 1451-1486 CODEN: JMOBAK; ISSN: 0022-2836

PB Academic Press

DT Journal

LA English

IT 179748-10-8, APC 8328

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)

(novel serine protease inhibition motif involving a multi-centered short hydrogen bonding network at active site)

RN 179748-10-8 : CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

AB We describe a new serine protease inhibition motif in which binding is mediated by a cluster of very short hydrogen bonds (<2.3 .ANG.) at the

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active site. This protease-inhibitor binding paradigm is obsd. at high resoln. in a large set of crystal structures of trypsin, thrombin, and urokinase-type plasminogen activator (uPA) bound with a series of small mol. inhibitors (2-(2-phenol)indoles and 2-(2-phenol)benzimidazoles). In each complex there are eight enzyme-inhibitor or enzyme-water-inhibitor hydrogen bonds at the active site, three of which are very short. These short hydrogen bonds connect a triangle of oxygen atoms comprising O.gamma.Ser195, a water mol. co-bound in the oxyanion hole (H2Ooxy), and the phenolate oxygen atom of the inhibitor (06'). Two of the other hydrogen bonds between the inhibitor and active site of the trypsin and uPA complexes become short in the thrombin counterparts, extending the three-centered short hydrogen-bonding array into a tetrahedral array of atoms (three oxygen and one nitrogen) involved in short hydrogen bonds. In the uPA complexes, the extensive hydrogen-bonding interactions at the active site prevent the inhibitor S1 amidine from forming direct hydrogen bonds with Asp189 because the S1 site is deeper in uPA than in trypsin or thrombin. Ionization equil. at the active site assocd. with inhibitor binding are probed through detn. and comparison of structures over a wide range of pH (3.5 to 11.4) of thrombin complexes and of trypsin complexes in three different crystal forms. The high-pH trypsin-inhibitor structures suggest that His57 is protonated at pH values as high as 9.5. The pH-dependent inhibition of trypsin, thrombin, uPA and factor Xa by 2-(2-phenol) benzimidazole analogs in which the pKa of the phenol group is modulated is shown to be consistent with a binding process involving ionization of both the inhibitor and the enzyme. These data further suggest that the pKa of His57 of each protease in the unbound state in soln. is about the same, apprx.6.8. By comparing inhibition consts. (Ki values), inhibitor solubilities, inhibitor conformational energies and corresponding structures of short and normal hydrogen bond-mediated complexes, we have estd. the contribution of the short hydrogen bond networks to inhibitor affinity (.apprx.1.7 kcal/mol). The structures and Ki values assocd. with the short hydrogen-bonding motif are compared with those corresponding to an alternate, Zn2+-mediated inhibition motif at the active site. Structural differences among apo-enzymes, enzyme-inhibitor and enzyme-inhibitor-Zn2+ complexes are discussed in the context of affinity determinants, selectivity development, and structure-based inhibitor design. (c) 2001 Academic Press.

RE.CNT 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2003 ACS
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FAN.CNT 4

	PATENT NO.	KIND	DATE.	APPLICATION NO. DATE	
		<del>-</del>			
PΙ	US 6200957	B1	20010313	US 1998-115497 19980714	
				US 1995-8633P P 19951214	
				US 1996-760816 A219961205	

AN 2001:178434 CAPLUS

DN 134:222629

TI Preparation of indoles as antagonists of gonadotropin releasing hormone

IN Goulet, Mark; Ashton, Wallace T.; Chu, Lin; Fisher, Michael H.; Lin,
 Peter; Ponpipom, Mitree M.; Wyvratt, Matthew J.; Girotra, Narindar N.;
 Young, Jonathan

PA Merck & Co., Inc., USA

SO U.S., 53 pp., Cont.-in-part of U.S. 5,780,437. CODEN: USXXAM

DT Patent

LA English

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                     Α
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                                          US 1996-760816
                                                         19961205
    JP 2001106685
                     A2
                           20010417
                                          JP 2000-257791 19961210
                                          US 1995-8633P P 19951214
                                          GB 1996-3242 A 19960216
                                          JP 1997-522124 A319961210
    ZA 9610536
                      Α
                           19970814
                                          ZA 1996-10536 19961213
                                          US 1995-8633P P 19951214
    CA 2337407
                      AΑ
                           20000127
                                          CA 1999-2337407 19990709
                                          US 1998-115497 A 19980714
                                          WO 1999-US15581W 19990709
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        RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
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            CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                          US 1998-115497 A 19980714
    AU 9949816
                      A1
                           20000207
                                          AU 1999-49816
                                                         19990709
                                          US 1998-115497 A 19980714
                                          WO 1999-US15581W 19990709
    EP 1095038
                     A1
                           20010502
                                         EP 1999-933850 19990709
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO
                                          US 1998-115497 A 19980714
                                          WO 1999-US15581W 19990709
    JP 2002520409
                      T2
                           20020709
                                          JP 2000-560119 19990709
                                          US 1998-115497 A 19980714
                                         · WO 1999-US15581W 19990709
PATENT FAMILY INFORMATION:
   1997:511777
    PATENT NO.
                     KIND DATE
                                        APPLICATION NO. DATE
                    A1 19970619 WO 1996-US19444 19961210
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    WO 9721704
PΤ
        W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, HU,
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            NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN,
            AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
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            MR, NE, SN, TD, TG
                                          US 1995-8633P P 19951214
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    CA 2240108
                      AΑ
                           19970619
                                          CA 1996-2240108 19961210
                                          US 1995-8633P P 19951214
                                          GB 1996-3242 A 19960216
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                      A1
                           19970703
                                          AU 1997-14106
                                                          19961210
    AU 707641
                      B2
                           19990715
                                          US 1995-8633P P 19951214
                                          GB 1996-3242 A 19960216
                                          WO 1996-US19444W 19961210
    EP 873336
                      Α1
                           19981028
                                          EP 1996-944249 19961210
    EP 873336
                     В1
                           20020327
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI
                                          US 1995-8633P P 19951214
                                          GB 1996-3242 A 19960216
                                          WO 1996-US19444W 19961210
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	JP 11506471	Т2	19990608		GB 1996-3242 A 19960216 JP 1996-522124 19961210 US 1995-8633P P 19951214 GB 1996-3242 A 19960216
	JP 2001106685	A2	20010417		WO 1996-US19444W 19961210 JP 2000-257791 19961210 US 1995-8633P P 19951214 GB 1996-3242 A 19960216
	JP 3230818	В2	20011119		JP 1997-522124 A319961210 JP 1997-522124 19961210 US 1995-8633P P 19951214
	AT 215081	E	20020415		GB 1996-3242 A 19960216 AT 1996-944249 19961210 US 1995-8633P P 19951214 GB 1996-3242 A 19960216
•	ES 2174129	Т3	20021101		WO 1996-US19444W 19961210 ES 1996-944249 19961210 US 1995-8633P P 19951214 GB 1996-3242 A 19960216
	ZA 9610536	A	19970814		ZA 1996-10536 19961213
	NO 9802729	A	19980813		US 1995-8633P P 19951214 NO 1998-2729 19980612 US 1995-8633P P 19951214 GB 1996-3242 A 19960216 WO 1996-US19444W 19961210
FAN	1998:479019 PATENT NO.		DATE		APPLICATION NO. DATE
PI		Α	19980714 20010313		US 1996-760816 19961205 US 1998-115497 19980714 US 1995-8633P P 19951214 US 1996-760816 A219961205
FAN	2000:68450 PATENT NO.	KIND	DATE		APPLICATION NO. DATE
PI	GE, HR, MD, MG, TT, UA, RW: GH, GM, ES, FI, CI, CM,	A1 AM, AU, HU, ID, MK, MN, US, UZ, KE, LS, FR, GB, GA, GN,	20000127 AZ, BA, IL, IN, MX, NO, VN, YU, MW, SD, GR, IE, GW, ML,	BB, IS, NZ, ZA, SL, IT,	WO 1999-US15581 19990709 BG, BR, BY, CA, CN, CU, CZ, EE, GD, JP, KG, KR, KZ, LC, LK, LR, LT, LV, PL, RO, RU, SG, SI, SK, TJ, TM, TR, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM SZ, UG, ZW, AT, BE, CH, CY, DE, DK, LU, MC, NL, PT, SE, BF, BJ, CF, CG, NE, SN, TD, TG US 1998-115497 A 19980714
	US 6200957	B1	20010313		US 1998-115497 19980714 US 1995-8633P P 19951214 US 1996-760816 A219961205
	CA 2337407	AA ·	20000127		CA 1999-2337407 19990709 US 1998-115497 A 19980714 WO 1999-US15581W 19990709
	AU 9949816	A1	20000207		AU 1999-49816 19990709 US 1998-115497 A 19980714 WO 1999-US15581W 19990709
	EP 1095038 R: AT, BE, IE, SI,			FR,	EP 1999-933850 19990709 GB, GR, IT, LI, LU, NL, SE, MC, PT,

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OS MARPAT 134:222629

IT 192644-10-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of indoles as antagonists of gonadotropin releasing hormone)

RN 192644-10-3 CAPLUS

CN Carbamic acid, [2-[2-(3,5-dimethylphenyl)-5-[(hydroxyamino)iminomethyl]-1H-indol-3-yl]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{Me} \\ & \text{HO-NH-C-OBu-t} \\ & \text{NH} \end{array}$$

GΙ

HN Me Me

ΙI

The title compds. [I; A = alkyl, cycloalkyl, alkenyl, etc.; R0 = H, alkyl, aryl, etc.; R1 = (un)substituted 3-pyridyl, 4-pyridyl, benzimidazolyl, etc.; R2 = H, alkyl, aryl, etc.; R2 and A taken together form 5-7 membered ring; R3-R5 = H, alkyl, alkenyl, etc.; R3 and R4 taken together form 3-7 membered carbocyclic ring or heterocyclic ring contg. 1-3 heteroatoms selected from, N, O, S; R6 = H, alkyl, aryl, etc.; R7 = H, alkyl (when X = H, halo, then R7 is absent); R8 = heterocyclic ring, bicyclic heterocyclic ring, etc.; R7 and R8 taken together form (un)substituted heterocyclic ring contg. one or more heteroatoms selected form N, O or S; X = N, O, CO, etc.; m = 0-3; R9, R9a = H, alkyl, aryl, etc.; R10, R10a = H, alkyl, aryl, etc.], useful as antagonists of GnRH and as such may be useful for the treatment of a variety of sex-hormone related and other conditions in both men and women, were prepd. E.g., a multi-step synthesis of the indole II was given. Compds. I are effective at 0.001-1 mg/kg/day.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2003 ACS
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AN 2000:421114 CAPLUS

DN 133:58803

TI Preparation of 2-arylindole- or -benzimidazolecarboxamidines and analogs as serine protease inhibitors

IN Allen, Darin Arthur; Hataye, Jason M.; Hruzewicz, Witold N.; Kolesnikov, Aleksandr; Mackman, Richard Laurence; Rai, Roopa; Spencer, Jeffrey R.; Verner, Erik J.; Young, Wendy B.

PA Axys Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 187 pp.

CODEN: PIXXD2

DT Patent

LA English

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	WO	2000	0358	86	A.	3	2000	1026										
		W:					ΑU,											
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			JP,	KΕ,	KG,	ΚP,	KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MD,	MG,	MK,
			MN,	MW,	MX,	NO,	NZ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	TJ,
			TM,	TR,	TT,	UA,	UG,	US,	UΖ,	VN,	YU,	ZA,	ZW,	AM,	AZ,	BY,	KG,	KZ,
			MD,	RU,	TJ,	TM												
		RW:	GH,	GM,	ΚE,	LS,	MW,	SD,	SL,	SZ,	TZ,	UG,	ZW,	AT,	BE,	CH,	CY,	DE,
			DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	ΙT,	LU,	MC,	NL,	PT,	SE,	BF,	ВJ,	CF,
			CG,	CI,	CM,	GA,	GN,	GW,	ML,	MR,	NE,	SN,	TD,	TG				
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			ΙE,	SI,	LT,	LV,	FI,	RO										
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										U	S 19	98-1	1300	7PP	1998:	1218		
										W	O 19:	99-U	5303	02W	1999:	1217		
	EE	200100323		Α	A 20020815			E	E 20	01-2	010	0323	1999:	1217				
										U	\$ 19:	98-1	1300	7PP	1998:	1218		
							•			W	0 19:	99-U	5303	02W	1999:	1217		
	JP	2002	5324	79	T	2	2002	1002		J.	P 20	00-58	38148	8 :	1999:	1217		•

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OS MARPAT 133:58803

IT 277312-56-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of 2-arylindole- or -benzimidazolecarboxamidines and analogs as serine protease inhibitors)

RN 277312-56-8 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-methylphenyl)-3-[(4-nitrophenyl)methyl]- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $NH$ 
 $R$ 
 $CH_2$ 
 $NO_2$ 

ΙT 277312-20-6P 277312-21-7P 277312-22-8P 277312-23-9P 277312-24-0P 277312-25-1P 277312-26-2P 277312-27-3P 277312-28-4P 277312-29-5P 277312-30-8P 277312-31-9P 277312-32-0P 277312-33-1P 277312-34-2P 277312-35-3P 277312-36-4P 277312-37-5P 277312-38-6P 277312-39-7P 277312-40-0P 277312-41-1P 277312-42-2P 277312-43-3P 277312-44-4P 277312-45-5P 277312-46-6P 277312-47-7P 277312-48-8P 277312-49-9P 277312-50-2P 277312-51-3P 277312-52-4P 277312-53-5P 277312-54-6P 277312-57-9P 277312-59-1P 277312-60-4P 277312-61-5P 277312-62-6P 277312-74-0P 277312-75-1P 277312-76-2P 277312-77-3P 277312-78-4P 277312-79-5P 277312-80-8P 277312-81-9P 277312-82-0P 277312-83-1P 277312-84-2P 277312-85-3P 277312-86-4P 277312-87-5P 277312-88-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of 2-arylindole- or -benzimidazolecarboxamidines and analogs as

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serine protease inhibitors)

RN 277312-20-6 CAPLUS

CN [1,1'-Biphenyl]-3-acetamide, 5-[5-(aminoiminomethyl)-6-chloro-1H-indol-2-yl]-6-hydroxy-N,N-dimethyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me}_2\text{N-C-CH}_2\\ \text{H}_2\text{N-C-OH}_2\\ \text{H}_2\text{N-C-OH}\\ \text{NH} \end{array}$$

RN 277312-21-7 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-chloro-2-(2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

RN 277312-22-8 CAPLUS

CN Benzeneacetic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $CH_2-Ph$ 
 $CH_2-Ph$ 

RN 277312-23-9 CAPLUS

CN Benzenepropanoic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

Page .51

$$H_2N-C$$
 $CH_2-Ph$ 
 $CH_2-CH_2-CO_2H$ 
 $CH_2-Ph$ 

RN 277312-24-0 CAPLUS

CN 1H-Indole-5-carboximidamide, 3-[(4-aminophenyl)methyl]-2-(3-bromo-2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} H & R \\ H_2N-C & CH_2 \\ \hline \\ NH & NH_2 \end{array}$$

RN 277312-25-1 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3,5-dibromo-2-hydroxyphenyl)-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

RN 277312-26-2 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-chloro-2-hydroxy-5-methylphenyl)-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & C1 \\ & & & \\ H_2N-C & & & \\ & & & \\ & & & \\ NH & & & \\ \end{array}$$

RN 277312-27-3 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3,5-difluoro-2-hydroxyphenyl)-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $CH_2-Ph$ 
 $CH_2-Ph$ 

RN 277312-28-4 CAPLUS

CN Benzeneacetic acid, 3-[5-(aminoiminomethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

RN 277312-29-5 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(5-chloro-2-hydroxyphenyl)-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & HO \\ H \\ H_2N - C \\ \hline \\ NH \\ \end{array}$$

RN 277312-30-8 CAPLUS

CN Benzeneacetamide, 3-[5-(aminoiminomethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy-(9CI) (CA INDEX NAME)

RN 277312-31-9 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

RN 277312-32-0 CAPLUS '

CN 1H-Indole-5-carboximidamide, 2-(3-chloro-2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

RN 277312-33-1 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3,5-dichloro-2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Page 54

$$\begin{array}{c|c} & & & C1 \\ & & & \\ H_2N - C & & \\ & & & \\ NH & & & \\ \end{array}$$

RN 277312-34-2 CAPLUS

CN Benzamide, 3-[5-(aminoiminomethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

RN 277312.-35-3 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-3,5-dimethylphenyl)-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{HO} \\ \text{H} \\ \text{NH} \end{array}$$

RN 277312-36-4 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3,5-difluoro-2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

RN 277312-37-5 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3,5-dibromo-2-hydroxyphenyl)-3-methyl-(9CI) (CA INDEX NAME)

RN 277312-38-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[2-hydroxy-5-methyl-3-(3-thienyl)phenyl]-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ H_2N-C & & \\ & & \\ NH & & \\ \end{array}$$

RN 277312-39-7 CAPLUS

CN 1H-Indole-3-acetamide, 5-(aminoiminomethyl)-2-(3-bromo-2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ H_2N-C & & & \\ & & & \\ NH & & & \\ & & & \\ CH_2-C-NH_2 & \\ \end{array}$$

RN 277312-40-0 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3,5-dibromo-2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

RN 277312-41-1 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-5-methyl[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

RN 277312-42-2 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy[1,1'-biphenyl]-3-yl)- (9CI) (CA INDEX NAME)

RN 277312-43-3 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-chloro-2-hydroxyphenyl)-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

RN 277312-44-4 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-nitrophenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ H_2N-C & & & \\ NH & & & \\ \end{array}$$

RN 277312-45-5 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxyphenyl)-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

RN 277312-46-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(5-chloro-2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

RN 277312-47-7 CAPLUS

CN 1H-Indole-3-acetic acid, 5-(aminoiminomethyl)-2-(3-bromo-2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Br} \\ \text{HO} \\ \text{H} \\ \text{NH} \end{array}$$

RN 277312-48-8 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-3,5-dimethylphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{HO} \\ \text{H} \\ \text{NH} \end{array}$$

RN 277312-49-9 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-4',5-dimethyl[1,1'-biphenyl]-3-yl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ H_2N-C & & \\ & & \\ NH & & \\ \end{array}$$

RN 277312-50-2 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(5-bromo-2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

RN 277312-51-3 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & Me \\ & & & \\ H_2N - C & & & \\ & & & \\ NH & & & \\ \end{array}$$

RN 277312-52-4 CAPLUS

CN Benzoic acid, 2-[5-(aminoiminomethyl)-1H-indol-2-yl]- (9CI) (CA INDEX NAME)

RN 277312-53-5 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-methylphenyl)-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $CH_2-Ph$ 
 $NH$ 

RN 277312-54-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-chloro-2-(3,5-dichloro-2-hydroxyphenyl)-(9CI) (CA INDEX NAME)

$$\begin{array}{c} Cl \\ HO \\ H_2N-C \\ NH \end{array}$$

RN 277312-57-9 CAPLUS

CN lH-Indole-5-carboximidamide, 2-(3-bromo-2-hydroxy-5-methylphenyl)-3-[(3-nitrophenyl)methyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ H_2N-C & & & \\ & & & \\ NH & & & \\ & & & \\ NH & & & \\ \end{array}$$

RN 277312-59-1 CAPLUS

CN [1,1'-Biphenyl]-3-acetamide, 5-[5-(aminoiminomethyl)-6-chloro-1H-indol-2-yl]-6-hydroxy-N-[2-(1-piperidinyl)ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Cl} & \text{Ph} \\ \text{HO} & \text{Ph} \\ \text{H}_2\text{N-C} & \text{NH-CH}_2\text{-CH}_2\text{-NH-CH}_2\text{-CH}_2\text{-NH-CH$$

RN 277312-60-4 CAPLUS

CN [1,1'-Biphenyl]-3-acetamide, 5-[5-(aminoiminomethyl)-6-chloro-1H-indol-2-yl]-6-hydroxy-N-[(tetrahydro-2-furanyl)methyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & &$$

RN 277312-61-5 CAPLUS

CN Thiomorpholine, 4-[[5-[5-(aminoiminomethyl)-6-chloro-1H-indol-2-yl]-6-hydroxy[1,1'-biphenyl]-3-yl]acetyl]-, 1,1-dioxide (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & &$$

RN 277312-62-6 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-fluoro-2-(2-hydroxy[1,1'-biphenyl]-3-yl)-(9CI) (CA INDEX NAME)

$$\begin{array}{c|c} F & H \\ \hline H_2N - C & OH \\ \hline NH & OH \\ \end{array}$$

RN 277312-74-0 CAPLUS

CN Benzeneacetic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy-, methyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ H_2N-C & & & \\ H_2N-C & & & \\ & & \\ NH & & \\ \end{array}$$

RN 277312-75-1 CAPLUS

CN Benzenepropanoic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy-, methyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ H_2N-C & & \\ & & \\ NH & & \\ \end{array}$$

RN 277312-76-2 CAPLUS

CN 1H-Indole-5-carboximidamide, 3-[(3-aminophenyl)methyl]-2-(3-bromo-2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ H_2N-C & & & \\ & & & \\ NH & & & \\ & & & \\ NH & & & \\ \end{array}$$

RN 277312-77-3 CAPLUS

CN 1H-Indole-5-carboximidamide, 3-[(3-aminophenyl)methyl]-2-(2-hydroxy-5-methylphenyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & &$$

RN 277312-78-4 CAPLUS

CN Pyrrolidine, 1-[[5-[5-(aminoiminomethyl)-6-chloro-1H-indol-2-yl]-6-hydroxy[1,1'-biphenyl]-3-yl]acetyl]-2-(methoxymethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{Ph} & \text{CH}_2-\text{OMe} \\ & \text{H}_2\text{N}-\text{C} & \text{N} \end{array}$$

RN 277312-79-5 CAPLUS

CN 1H-Indole-5-carboximidamide, 6-chloro-2-[2-hydroxy-5-[2-oxo-3-(tetrahydro-2-furanyl)propyl][1,1'-biphenyl]-3-yl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & &$$

RN 277312-80-8 CAPLUS

CN [1,1'-Biphenyl]-3-acetamide, 5-[5-(aminoiminomethyl)-6-chloro-1H-indol-2-yl]-6-hydroxy-N-(3-methoxypropyl)- (9CI) (CA INDEX NAME)

RN 277312-81-9 CAPLUS

CN 4-Morpholinecarboxamide, N-[2-[[5-[5-(aminoiminomethyl)-6-chloro-1H-indol-2-yl]-6-hydroxy[1,1'-biphenyl]-3-yl]oxy]ethyl]- (9CI) (CA INDEX NAME)

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$$\begin{array}{c|c} & & & \\ & & & \\$$

RN 277312-82-0 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-[3-bromo-2-hydroxy-5-[2-(phosphonooxy)ethyl]phenyl]-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $CH_2-CH_2-OPO_3H_2$ 
 $CH_2-Ph$ 

RN 277312-83-1 CAPLUS

CN Benzeneacetamide, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy-N-[[1-(1-iminoethyl)-4-piperidinyl]oxy]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

RN 277312-84-2 CAPLUS

CN Benzenebutanoic acid, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

Page 65

$$H_2N-C$$
 $CH_2-Ph$ 
 $CH_2-Ph$ 

RN 277312-85-3 CAPLUS

CN Benzeneacetamide, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & & \\ H_2N-C & & \\ & & \\ NH & & \\ \end{array}$$

RN 277312-86-4 CAPLUS ·

CN Benzeneacetamide, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy-N,N-dimethyl- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $H_2N-C$ 
 $CH_2-Ph$ 
 $O$ 

RN 277312-87-5 CAPLUS

CN Pentanediamide, 3-[3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxyphenyl]-N,N'-bis[2-(4-morpholinyl)ethyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} CH_2 \\ CH_2 \\ \\ NH \\ \\ HO \\ CH_2 \\ CH$$

RN 277312-88-6 CAPLUS

CN Benzenepropanamide, 3-[5-(aminoiminomethyl)-3-(phenylmethyl)-1H-indol-2-yl]-5-bromo-4-hydroxy- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ H_2N-C & & & \\ H_2N-C & & & \\ NH & & & \\ \end{array}$$

IT 277313-28-7P 277313-29-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of 2-arylindole- or -benzimidazolecarboxamidines and analogs as serine protease inhibitors)

RN 277313-28-7 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 5-[6-chloro-5-[(hydroxyamino)iminomethyl]-1H-indol-2-yl]-6-hydroxy- (9CI) (CA INDEX NAME)

RN 277313-29-8 CAPLUS

CN [1,1'-Biphenyl]-3-acetic acid, 5-[5-(aminoiminomethyl)-6-chloro-1H-indol-2-yl]-6-hydroxy- (9CI) (CA INDEX NAME)

$$HO_2C-CH_2$$
 $H_2N-C$ 
 $OH$ 
 $OH$ 

GΙ

AB R1Z1Z2R2 [I; R1 = H2NC(:NH), etc.; R2 = halo, OH, CO2H, phenyl(alkyl)oxy, etc.; Z1 = (un)substituted indolylene, -benzimidazolylene, etc.; Z2 = (un)substituted phenylene, pyridinediyl, etc.] were prepd. Thus, 1-(3-bromo-2-hydroxy-5-methylphenyl)-3-(4-nitrophenyl)-1-propanone was condensed with 4-(H2NHN)C6H4C(:NH)NH2 and the product cyclized to give, after redn., title compd. II. Data for biol. activity of I were given.

L4 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 2000:68450 CAPLUS

DN 132:107953

TI Preparation of heterocyclic compounds as antagonists of gonadotropin releasing hormone

IN Goulet, Mark; Ashton, Wallace T.; Chu, Lin; Fisher, Michael H.; Lin,
Peter; Ponpipom, Mitree M.; Wyvratt, Matthew J.; Girotra, Narindar N.;
Young, Jonathan

PA Merck and Co., Inc., USA

SO PCT Int. Appl., 138 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 4

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2000004013 A1 20000127 WO 1999-US15581 19990709

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             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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PATENT FAMILY INFORMATION:
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    CN 1208412
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                                           JP 2000-257791 19961210
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JP 3230818	B2 20011119	US 1995-8633P P 19951214 GB 1996-3242 A 19960216 JP 1997-522124 A319961210 JP 1997-522124 19961210
AT 215081	E 20020415	US 1995-8633P P 19951214 GB 1996-3242 A 19960216
AT 215081	E 20020415	US 1995-8633P P 19951214 GB 1996-3242 A 19960216
ES 2174129	T3 20021101	WO 1996-US19444W 19961210 ES 1996-944249 19961210 US 1995-8633P P 19951214
ZA 9610536	A 19970814	GB 1996-3242 A 19960216 ZA 1996-10536 19961213 US 1995-8633P P 19951214
NO 9802729	A 19980813	NO 1998-2729 19981214 US 1995-8633P P 19951214
		GB 1996-3242 A 19960216 WO 1996-US19444W 19961210
FAN 1998:479019 PATENT NO.	KIND DATE	APPLICATION NO. DATE
PI US 5780437 US 6200957	A 19980714 B1 20010313	US 1998-115497 19980714 .
FAN 2001:178434		US 1995-8633P P 19951214 US 1996-760816 A219961205
PATENT NO.	KIND DATE	APPLICATION NO. DATE
PI US 6200957	B1 20010313	US 1998-115497 19980714 US 1995-8633P P 19951214
US 5780437 JP 2001106685	A 19980714 A2 20010417	US 1996-760816 A219961205 US 1996-760816 19961205 JP 2000-257791 19961210 US 1995-8633P P 19951214 GB 1996-3242 A 19960216
ZA 9610536	A 19970814	JP 1997-522124 A319961210 ZA 1996-10536 19961213 US 1995-8633P P 19951214
CA 2337407	AA 20000127	CA 1999-2337407 19990709 US 1998-115497 A 19980714
GE, HR, MD, MG, TT, UA, RW: GH, GM, ES, FI,	HU, ID, IL, IN, MK, MN, MX, NO, US, UZ, VN, YU, KE, LS, MW, SD, FR, GB, GR, IE, GA, GN, GW, ML,	WO 1999-US15581W 19990709 WO 1999-US15581 19990709 BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, MR, NE, SN, TD, TG US 1998-115497 A 19980714
AU 9949816 EP 1095038	A1 20000207 A1 20010502	AU 1999-49816 19990709 US 1998-115497 A 19980714 WO 1999-US15581W 19990709 EP 1999-933850 19990709
		FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

09868276.3 Page 70

WO 1999-US15581W 19990709 JP 2002520409 T2 20020709 JP 2000-560119 19990709 US 1998-115497 A 19980714 WO 1999-US15581W 19990709

OS MARPAT 132:107953

IT 192644-10-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of heterocyclic compds. as antagonists of gonadotropin releasing hormone)

RN 192644-10-3 CAPLUS

CN Carbamic acid, [2-[2-(3,5-dimethylphenyl)-5-[(hydroxyamino)iminomethyl]-1H-indol-3-yl]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Ι

$$\begin{array}{c|c} & & & \\ & & \\ \text{HO-NH-C} & & \\ & & \\ \text{NH} & & \\ &$$

GΙ

$$\begin{array}{c|c}
 & CH_2 \downarrow NH + CH_2 \downarrow 4 \\
 & NH + CH_2 \downarrow 4$$

ΙI

09868276.3 Page 71

AΒ The title compds. of formula I [A = (un)substituted C1-6 alkyl, (un) substituted C3-7 cycloalkyl, (un) substituted C3-6 alkenyl, (un) substituted C3-6 alkynyl, etc; R0 = H, (un) substituted C1-6 alkyl, etc; R1 = generic heteroarom. rings with proviso given; R2 = H, (un) substituted C1-6 alkyl, (un) substituted aryl, etc; R2, A = combined form 5-7 atom ring; R3, R4, R5 = H, (un) substituted C1-6 alkyl, (un) substituted C2-6 alkenyl, CN, NO2, C1-3 perfluoroalkyl, etc; R3, R4 = combined form ring of 3-7 carbon atoms or a heterocyclic ring contg. 1-3 heteroatoms; R6, R7 = H, (un) substituted C1-6 alkyl, etc; R8 = C(O) OR20, C(0)NR20R21, NR20R21, etc with proviso given; R7, R8 = combined form hetercyclic ring; R9, R9a = H, (un) substituted C1-6 alkyl, etc; R9, R9a = combined form carbocyclic ring of 3-7 atoms; R10, R10a = H, (un) substituted C1-6 alkyl, (un) substituted aryl, etc; R10, R10a = combined form carbocyclic ring of 3-7 atoms, double bond oxygen] useful as gonadotropin releasing hormone antagonists (no data), are prepd. example, the title compd. II was prepd.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2003 ACS
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AN 1997:511777 CAPLUS

DN 127:121742

- TI Preparation of heterocyclic compounds as antagonists of gonadotropin releasing hormone
- IN Goulet, Mark; Ashton, Wallace T.; Chu, Lin; Fisher, Michael H.; Girotra, Narindar N.; Lin, Peter; Wyvratt, Matthew J.
- PA Merck & Co., Inc., USA; Goulet, Mark; Ashton, Wallace T.; Chu, Lin; Fisher, Michael H.; Girotra, Narindar N.; Lin, Peter; Wyvratt, Matthew J.
- SO PCT Int. Appl., 117 pp. CODEN: PIXXD2

DT Patent

LA English

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							KZ,							·					
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FAN	1998:479019 PATENT NO.	KIND	DATE	APPLICATION NO. DATE
PI	US 5780437 US 6200957	A B1	19980714 20010313	US 1996-760816 19961205 US 1998-115497 19980714 US 1995-8633P P 19951214 US 1996-760816 A219961205
FAN	2000:68450 PATENT NO.	KIND		APPLICATION NO. DATE
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                                           WO 1999-US15581W 19990709
OS
    MARPAT 127:121742
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     192644-10-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (prepn. of heterocyclic compds. as antagonists of gonadotropin
        releasing hormone)
ŔN
     192644-10-3 CAPLUS
     Carbamic acid, [2-[2-(3,5-dimethylphenyl)-5-[(hydroxyamino)iminomethyl]-1H-
CN
     indol-3-yl]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)
```

GΙ

$$R^{7}$$
 $R^{8}$ 
 $R^{20}$ 
 $R^{10}$ 
 $R^{$ 

Me

AB The title compds. I [A = alkyl, etc.; R = H, alkyl, etc.; R1 = heterocyclic ring (generic structures given); R2 = H, alkyl, etc.; or R2A = ring; R3, R4, R5 = H, (un)substituted alkyl, alkenyl, etc.; or R3R4 = ring; R6 = H, (un)substituted alkyl, etc.; R7 = H, (un)substituted alkyl; unless X is hydrogen or halo, then R7 is absent; R8 = heterocyclic ring, etc.; or R7R8 = heterocyclic ring; R9, R19 = H, (un)substituted alkyl; further details on R9R19 and R9A are given; R20, R10 = H, (un)substituted alkyl, etc.; further details on R20R10, and R9R20, R9R2, R20R2, R20A are given; m = 0 to 3; X = N, etc.], useful as antagonists of gonadotropin releasing hormone (no data), are prepd. I may be useful for the treatment of a variety of sex-hormone related and other conditions in both men and women. The title compd. II was prepd. in a multistep process.

L4 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2003 ACS

AN 1996:398902 CAPLUS

DN 125:131628

TI Derivatives of 5-amidine indole as inhibitors of thrombin catalytic

II ·

09868276.3

Page 75

ΑU Iwanowicz, Edwin J.; Lau, Wan F.; Lin, James; Roberts, Daniel G. M.; Seiler, Steven M.

CS Bristol-Myers Squibb Pharmaceutical Res. Inst., Princeton, NJ, 08543-4000,

SO Bioorganic & Medicinal Chemistry Letters (1996), 6(12), 1339-1344 CODEN: BMCLE8; ISSN: 0960-894X

PΒ Elsevier

DTJournal

LΑ English

IT' 179748-10-8P

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(prepn. of derivs. of 5-amidine indole as inhibitors of thrombin catalytic activity and structure-activity relations)

RN 179748-10-8 CAPLUS

CN1H-Indole-5-carboximidamide, 2-(2-hydroxyphenyl)- (9CI) (CA INDEX NAME)

GΙ

AΒ Substituted 5-amidine indoles were constructed based upon a computational anal. of putative modes of binding to thrombin utilizing coordinates from the crystal structure of BMS-183,507-.alpha.-thrombin complex. These analogs display competitive kinetics for the inhibition of human .alpha.-thrombin. Structure-activity relations are discussed. The most potent member of this series I, shows marked potency for thrombin with an inhibition const., Ki of 260 nM.

L4ANSWER 19 OF 19 CAPLUS COPYRIGHT 2003 ACS

Ι

1985:346 CAPLUS -AN

102:346 DN

TIHypotensive effect of aromatic amidines and imidazolines

ΑU Bielenberg, G. W.; Krieglstein, J.

CS Inst. Pharmakol. Toxikol., Philipps-Univ., Marburg/Lahn, 3550, Fed. Rep. 09868276.3 .

Page 76

Ger.

SO Arzneimittel-Forschung (1984), 34(9), 958-67 CODEN: ARZNAD; ISSN: 0004-4172

DT Journal

LA German

IT 93490-78-9

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antihypertensive activity of)

RN 93490-78-9 CAPLUS

CN 1H-Indole-5-carboximidamide, 2-(4-aminophenyl)- (9CI) (CA INDEX NAME)

GΙ

$$^{\text{HN}}_{\text{H}_2\text{NC}}$$
  $^{\text{NH}}_{\text{CNH}_2}$   $^{\text{NH}}_{\text{CNH}_2}$ 

AB Of 16 arom. amidines or imidazolines tested for hypotensive activity in exptl. animals, all substances, except for 5-amidino-2-phenylindole (271/179) [93490-77-8], caused a dose-dependent hypotensive effect. Pentamidine (I) [100-33-4] was one of the most effective hypotensives. The biscationic character of a compd. was a prerequisite for strong antihypertensive activity. The antihypertensive activity of the most active compds. appeared to have a peripheral origin and did not appear to be mediated via parasympathomimetic or histaminic mechanisms. Cardiovascular effects of these compds. are also given. The antihypertensive activity of these compds. is discussed in terms of a musculotropic action on vascular smooth muscle.

=> d his

(FILE 'HOME' ENTERED AT 12:03:41 ON 13 JUN 2003)

FILE 'REGISTRY' ENTERED AT 12:03:57 ON 13 JUN 2003

L1 STRUCTURE UPLOADED

L2 6 S L1

L3 119 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 12:05:23 ON 13 JUN 2003

L4 19 S- L3

=> d cost		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
CONNECT CHARGES	1.36	2.19
NETWORK CHARGES	0.24	0.42
SEARCH CHARGES	0.00	147.75
DISPLAY CHARGES	110.83	110.83
· ·		
	112.43	261.19
CAPLUS FEE (5%)	5.61	5.61
		<del>-</del>
FULL ESTIMATED COST	118.04	266.80
<u> </u>		
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-12.37	-12.37

study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of N-benzyl-2-phenylindoles as estrogenic agents)

RN 198479-63-9 CAPLUS

CN 1H-Indole, 3-methyl-5-(phenylmethoxy)-2-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

$$Ph-CH_2-O$$

Me

 $O-CH_2-Ph$ 
 $N$ 
 $N$ 

## IT 198479-64-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of N-benzyl-2-phenylindoles as estrogenic agents)

RN 198479-64-0 CAPLUS

CN 1H-Indole, 2-(4-fluorophenyl)-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

GΙ

## \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title compds. [I or II; R1 = H, OH, C14 esters or alkyl ethers, halo; R2-R6 = H, OH, halo, etc. (with the proviso that, when R1 is H, R2 is not OH); n = 2-3; X = H, CN, NO2, etc.; Z = CH:CHC(O)Y, C.tplbond.C(CH2)nY; Y = NR7R8 (wherein R7, R8 = H, C1-6 alkyl, Ph; R7R8 = (CH2)p; p = 2-6), a (un)satd. 5-7 membered heterocycle, a bicyclic ring system], useful as estrogenic agents for treating or preventing bone loss, disease states or syndromes which are caused or assocd. with an estrogen deficiency, and cardiovascular disease, were prepd. by reacting the indole III with an acrylamide H2C:CHC(O)Y or by reacting the indole IV with HC.tplbond.C(CH2)nY. Thus, compd. (E)-I [R1, R4 = OH; R2, R3, R5, R6 = H; X = Me; Z = CH:CHC(O)NHtBu] showed RBA (17.beta.-estradiol = 100) of 40.

L10 ANSWER 28 OF 52 CAPLUS COPYRIGHT 2003 ACS

AN 1997:701837 CAPLUS

DN 127:358782

Patel

09868276.1 Page 320

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ΤI
    Preparation of 2-phenyl-1-[4-(2-aminoethoxy)benzyl] indoles as
    estrogenic agents
    Miller, Chris P.; Tran, Bach D.; Collini, Michael D.
IN
    American Home Products Corporation, USA
PΑ
    Eur. Pat. Appl., 85 pp.
SO
    CODEN: EPXXDW
DT
     Patent
    English
LΑ
FAN: CNT 1
    PATENT NO.
                    KIND DATE
                                         APPLICATION NO. DATE
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                           -----
                                        , -----
    EP 802183
PΙ
                      A1
                           19971022
                                         EP 1997-302576 19970415
                           20011010
    EP 802183
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        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE,
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                                          US 1996-633974 A 19960419
                                          US 1997-833271 A 19970404
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                      В6
                           20010710
                                          SK 1997-472
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                      Ε
                           20011015
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                                          ES 1997-302576 19970415
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                           20011216
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     TW 381093
                           20000201
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    AU 9718920
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                          19971023
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    AU 710149
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                                          US 1996-633974 A 19960419
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                           19971020
                                          NO 1997-1815
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                                          US 1997-833271 A 19970404
     CN 1170719
                           19980121
                                         · CN 1997-113496 19970418
                      Α
     CN 1106383
                      В
                           20030423
                                          US 1996-633974 A 19960419
                                          US 1997-833271 A 19970404
                    . A2
     JP 10036346
                           19980210
                                          JP 1997-101563 19970418
                                          US 1996-633974 A 19960419
                                          US 1997-833271 A 19970404
     CA 2203078
                      AA
                           19981004
                                          CA 1997-2203078 19970418
                                          US 1997-833271 A 19970404
     BR 9701895
                           19981110
                                          BR 1997-1895
                                                           19970422
                      Α
                                          US 1996-633974 A 19960419
     HK 1002863
                           20020215
                                          HK 1998-101958 19980310
                      Α1
                                          US 1996-633974 A 19960419
                                          US 1997-833271 A 19970404
     US 6127404
                           20001003
                                          US 1999-388580 19990902
                                          US 1996-15553P P 19960419
                                          US 1997-833271 A319970404
     US 6326367
                     B1
                          20011204
                                          US 1999-388581
                                                          19990902
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Patel <6/13/2003>

## 09868276.1 Page 321 US 1996-15553P P 19960419 US 1997-833271 A319970404 US 6225308 В1 20010501 US 1999-416318 19991012 US 1996-15553P P 19960419 US 1997-833271 A319970404 US 6232307 В1 20010515 US 1999-416078 19991012 US 1996-15553P P 19960419 US 1997-833271 A319970404 US 2001021719 Α1 20010913 US 2001-779048 20010208 US 6291451 В1 20010918 US 1996-15553P P 19960419 US 1997-833271 A319970404 US 1999-416318 A119991012 MARPAT 127:358782 OS 91444-18-7P 198479-60-6P 198479-61-7P IT 198479-62-8P 198479-63-9P 198479-64-0P 198479-65-1P 198479-66-2P 198479-67-3P 198479-68-4P 198479-69-5P 198479-70-8P 198479-71-9P 198479-72-0P 198479-73-1P 198479-74-2P 198479-75-3P 198479-76-4P 198480-99-8P 198481-07-1P 198481-12-8P 198481-34-4P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. of 2-phenyl-1-[4-(2-aminoethoxy)benzyl]indoles as estrogenic agents) RN91444-18-7 CAPLUS CN1H-Indole, 5-methoxy-2-(4-methoxyphenyl)-3-methyl- (9CI) (CA INDEX NAME)

RN 198479-60-6 CAPLUS CN 1H-Indole, 3-methyl-2-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

RN 198479-61-7 CAPLUS
CN 1H-Indole, 2-(4-methoxyphenyl)-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

09868276.1

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RN 198479-62-8 CAPLUS

CN 1H-Indole, 2-(4-ethoxyphenyl)-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

RN 198479-63-9 CAPLUS

CN ·1H-Indole, 3-methyl-5-(phenylmethoxy)-2-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ \text{Ph-} & \text{CH}_2 - \text{O} \end{array}$$

RN 198479-64-0 CAPLUS

CN 1H-Indole, 2-(4-fluorophenyl)-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

RN 198479-65-1 CAPLUS

CN 1H-Indole; 2-[3-methoxy-4-(phenylmethoxy)phenyl]-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME) 09868276.1 Page 323

RN 198479-66-2 CAPLUS

CN 1H-Indole, 2-(1,3-benzodioxol-5-yl)-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

RN 198479-67-3 CAPLUS

CN 1H-Indole, 3-methyl-2-[4-(1-methylethoxy)phenyl]-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & H & OPr-i \\ \hline & N & \\ Ph-CH_2-O & Me \end{array}$$

RN 198479-68-4 CAPLUS

CN 1H-Indole, 2-[4-(cyclopentyloxy)phenyl]-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} H & \\ N & \\ N & \\ \end{array}$$

RN 198479-69-5 CAPLUS

CN 1H-Indole, 3-methyl-5-(phenylmethoxy)-2-[4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)

Patel <6/13/2003>

RN 198479-70-8 CAPLUS

CN 1H-Indole, 3-methyl-2-(4-methylphenyl)-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

$$_{\mathrm{Ph}-\mathrm{CH}_{2}-\mathrm{O}}$$
  $_{\mathrm{Me}}^{\mathrm{H}}$   $_{\mathrm{Me}}$ 

RN 198479-71-9 CAPLUS

CN 1H-Indole, 2-(4-chlorophenyl)-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

RN 198479-72-0 CAPLUS

CN 1H-Indole, 2-(2,4-dimethoxyphenyl)-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

RN 198479-73-1 CAPLUS

CN 1H-Indole, 3-methyl-5-(phenylmethoxy)-2-[3-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

$$Ph-CH_2-O$$
 $Me$ 
 $O-CH_2-Ph$ 

09868276.1 Page 325

$$Ph-CH_2-O$$

Me

 $O-CH_2-Ph$ 

RN 198479-74-2 CAPLUS

CN 1H-Indole, 2-[3-fluoro-4-(phenylmethoxy)phenyl]-3-methyl-5-(phenylmethoxy)(9CI) (CA INDEX NAME)

$$Ph-CH_2-O$$

Me

 $Ph-CH_2-O$ 
 $Ph-CH_2-O$ 
 $Ph-CH_2-O$ 

RN 198479-75-3 CAPLUS

CN 1H-Indole, 2-(3-methoxyphenyl)-3-methyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} H \\ N \\ \text{OMe} \end{array}$$

RN 198479-76-4 CAPLUS

CN 1H-Indole, 3-methyl-5-(phenylmethoxy)-2-[4-(trifluoromethoxy)phenyl]-(9CI) (CA INDEX NAME)

$$Ph-CH_2-O$$

Me

 $O-CF_3$ 

RN 198480-99-8 CAPLUS

CN 1H-Indole, 5-(phenylmethoxy)-2-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

RN 198481-07-1 CAPLUS

CN 1H-Indole, 3-ethyl-5-(phenylmethoxy)-2-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

RN 198481-12-8 CAPLUS

CN 1H-Indole-3-carbonitrile, 5-(phenylmethoxy)-2-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ \text{Ph-CH}_2-\text{O} & & \\ & &$$

RN 198481-34-4 CAPLUS

CN 1H-Indole, 5-fluoro-3-methyl-2-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

GΙ

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title compds. [I or II; R1 = H, OH, C1-12 ester, etc.; R2-R6 = H, OH, C1-6 alkyl, etc.; X = H, C1-6 alkyl, CN, etc.; n = 2-3; Y = NR7R8 (wherein R7, R8 = H, C1-6 alkyl, (un)substituted Ph; R7R8 = (CH2)p; p = 2-6), 5-7 membered (un)satd. heterocycle, C6-12 bicyclic

Patel

AB Title compds. [I; ABCD = CH:CHCH:CH, CH2CH2CO, CH2CH2COCH2, O2CCH2CH2, N:CHCH:N, SCH:N, N:NNH, etc.; R1 = SO2Me, SO2NH2, SO2NHCOF3, POMENH2, SONHNH2, etc.; R2 = H, halo, alkoxy, alkylthio, cyano, CF3, N3, CO2H, alkoxycarbonyl, alkyl, cycloalkyl, (substituted) Ph, naphthyl, mono- or disubstituted heteroaryl, etc.; R3, R4 = H, CF3, cyano, alkyl, CO2H, etc.], were prepd. Thus, 2-phenoxy-1-(4-methylthiophenyl)ethanone (prepn. given) was heated 2 h in polyphosphoric acid at 70.degree. to give 3-(4-methylthiophenyl)benzo[b] furan. This was refluxed with NBS and benzoyl peroxide in CCl4 under a spotlight to give 2-bromo-3-(4methylthiophenyl)benzo[b]furan. The latter was treated with phenylboric acid, Pd(PPh3)4, and NaOH in PhMe/EtOH at reflux for 20 h to give 3-(4-methylthiophenyl)-2-phenylbenzo[b]furan, which was oxidized to title compd. (II) using monoperoxyphthalic acid in CH2Cl2/MeOH. II at 100 nM inhibited cyclooxygenase-2 and -1 by 94% and 0%, resp.

L10 ANSWER 32 OF 52 CAPLUS COPYRIGHT 2003 ACS

AN 1996:331929 CAPLUS

DN 125:114547

Structure-activity relationships of benzimidazoles and related ΤI heterocycles as topoisomerase I poisons

ΑU Kim, Jung Sun; Sun, Qun; Gatto, Barbara; Yu, Chiang; Liu, Angela; Liu, Leroy F.; LaVoie, Edmond J.

Department of Pharmaceutical Chemistry, Rutgers, The State University of CS New Jersey, Piscataway, NJ, 08855, USA Bioorganic & Medicinal Chemistry (1996), 4(4), 621-630

SO CODEN: BMECEP; ISSN: 0968-0896

PΒ Elsevier

DT Journal

LΑ English

178970-27-9P 178970-28-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. of (methoxyphenyl)benzimidazoles.and analogs as topoisomerase inhibitors)

RN 178970-27-9 CAPLUS

CN 1H-Indole, 2-(4-methoxyphenyl)-5-nitro- (9CI) (CA INDEX NAME)

178970-28-0 CAPLUS RN

CN 1H-Indole, 2-(4-methoxyphenyl)-6-nitro- (9CI) (CA INDEX NAME)

AB A series of substituted 2-(4-methoxyphenyl)-1H-benzimidazoles were synthesized and evaluated as inhibitors of topoisomerase I. The presence of a 5-formyl-, 5-(aminocarbonyl)-, or 5-nitro group (i.e., substituents capable of acting as hydrogen bond acceptors) correlated with the potential of select derivs. to inhibit topoisomerase I. In contrast to bi- and terbenzimidazoles, the substituted benzimidazoles that were active as topoisomerase I poisons exhibited min. or no DNA binding affinity. 5-Nitro-2-(4-methoxyphenyl)-1H-benzimidazole exhibited the highest activity and was significantly more active than the 4-nitro positional isomer. The 5- and 6-nitro derivs. of 2-(4-methoxyphenyl)benzoxazole, 2-(4-methoxyphenyl)benzothiazole, and 2-(4-methoxyphenyl)indole were synthesized and their relative activity as topoisomerase I inhibitors detd. None of these heterocyclic analogs were effective in significantly inhibiting cleavable-complex formation in the presence of DNA and topoisomerase I, suggesting a high degree of structural specificity assocd. with the interaction of these substituted benzimidazoles with the enzyme or the enzyme-DNA complex. In evaluating their cytotoxicity, these new topoisomerase I poisons also exhibited no significant cross-resistance against cell lines that express camptothecin-resistant topoisomerase I.

L10 ANSWER 33 OF 52 CAPLUS COPYRIGHT 2003 ACS

AN 1996:327557 CAPLUS

DN 125:58819

TI Low-valent titanium induced **indole** formation: syntheses of secofascaplysin, indolopyridocoline and an endothelin-receptor-antagonist

AU Fuerstner, Alois; Ernst, Andreas; Krause, Helga; Ptock, Arne

CS Max-Planck-Inst. Kohlenforschung, Muelheim/Ruhr, D-45470, Germany

SO Tetrahedron (1996), 52(21), 7329-7344 CODEN: TETRAB; ISSN: 0040-4020

Elsevier

DT Journal

PB

LA English

OS CASREACT 125:58819

IT 178210-63-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(low-valent titanium induced **indole** formation in the syntheses of secofascaplysin, indolopyridocoline and an endothelin receptor antagonist)

RN 178210-63-4 CAPLUS

CN 1H-Indole, 3-(1,3-dioxolan-2-ylmethyl)-2-(2-pyridinyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & H & \\ \hline & N & \\ \hline & R & \\ CH_2 & \\ \hline & O \\ \end{array}$$

IT 178210-65-6P 178210-66-7P 178210-67-8P

AB Treating indan-1,3-dione (I) with indole, 2-phenylindole, antipyrine, 4-aminoantipyrine and 3-amino-1-phenylpyrazol-2-in-5-one gave addn. at C-1; thus, treating I with indole gave 82% II (R = H), whose Schmidt reaction gave carbostyrile III. Alkylation of I with gramine methosulfate and skatyl bromide occurred at C-2 to give IV (R1 = R2 = 3-indolylmethyl; R1 = H, R2 = 3-indolylmethyl), resp. Condensing I with 3-formylindole gave IV (R1R2 = 3-indolmethylene), whose treatment with Me2NH gave IV (R1 = H, R2 = .alpha.-dimethylamino-3-indolylmethyl).

L10 ANSWER 43 OF 52 CAPLUS COPYRIGHT 2003 ACS

AN 1992:426337 CAPLUS

DN 117:26337

TI Preparation and formulation of 2-phenylindole derivatives as lipoxygenase inhibitors

IN Hasegawa, Yukio; Suzuki, Yasushi; Sato, Michitaka; Yamamoto, Norio; Hasumi, Kohichi; Shitara, Kazuhiro; Miyasaka, Katsuhiko; Mikami, Takashi; Miyazawa, Katsuhiko; et al.

PA Teikoku Hormone Mfg. Co., Ltd., Japan

SO PCT Int. Appl., 65 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PAT	CENT 1	NO.		KII	ND.	DATE			API	PLICATIO	ON NO.	DATE
ΡΙ	WO	9202! W:		CA,	 A: JP,		19920 US	0220		WO	1991-J	P1000	19910725
		RW:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB, C	GR, IT,	LU, NL	, SE
										JP	1990-2	01142	19900731
										JP	1990-2	33094	19900905
	ΑU	9182259			A1	19920302		AU	1991-8	2259	19910725		
										JP	1990-2	01142	19900731
										JP	1990-2	33094	19900905
										WO	1991-J	P1000	19910725
	JP	2988	723		B	2	1999	1213		JP	1991-5	12380	19910725
										JΡ	1990-2	01142	19900731
										JP	1990-2	33094	19900905
										WO	1991-J	P1000	19910725

OS MARPAT 117:26337

IT 141771-84-8P 141771-85-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

Patel

09868276.1 Page 453

(prepn. and reaction of, in prepn. of antiallergic agent)
RN 141771-84-8 CAPLUS
CN Phenol, 2-amino-4-(5-methoxy-3-methyl-1H-indol-2-yl)-6-methyl-,
monohydrochloride (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} H & NH_2 \\ \hline Me & Me \\ \end{array}$$

● HCl

RN 141771-85-9 CAPLUS CN Phenol, 4-(5-methoxy-1H-indol-2-yl)-2-nitro- (9CI) (CA INDEX NAME)

IT 141771-95-1P 141771-96-2P 141771-97-3P 141771-98-4P 141772-00-1P 141772-01-2P 141772-02-3P 141772-03-4P 141772-05-6P 141772-06-7P 141772-07-8P 141772-08-9P 141772-09-0P 141772-11-4P 141772-12-5P 141772-13-6P 141772-14-7P 141772-15-8P 141772-16-9P 141772-17-0P 141772-18-1P 141772-19-2P 141772-20-5P 141772-21-6P 141772-22-7P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of, as lipoxygenase inhibitor) RN 141771-95-1 CAPLUS CN Phenol, 2-(dimethylamino)-4-(5-methoxy-3-methyl-1H-indol-2-yl)-6-methyl-,

monohydrochloride (9CI) (CA INDEX NAME)

RN 141771-96-2 CAPLUS

CN Acetamide, N-[2-[3-(dimethylamino)-4-hydroxy-5-methylphenyl]-3-methyl-1H-indol-5-yl]-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 141771-97-3 CAPLUS

CN Phenol, 2-(dimethylamino)-6-methyl-4-(3-methyl-1H-indol-2-yl)-, dihydrochloride (9CI) (CA INDEX NAME)

•2 HCl

RN 141771-98-4 CAPLUS

CN Methanesulfonamide, N-[2-[3-(dimethylamino)-4-hydroxy-5-methylphenyl]-3-methyl-1H-indol-5-yl]-, monohydrochloride (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} O & H \\ Me & NH \\ O & Me \\ NMe_2 \end{array}$$

HCl

RN 141772-00-1 CAPLUS

CN Methanesulfonamide, N-[2-hydroxy-3-methyl-5-[3-methyl-5-[(methylsulfonyl)amino]-1H-indol-2-yl]phenyl]- (9CI) (CA INDEX NAME)

RN 141772-01-2 CAPLUS

CN Phenol, 4-(5-methoxy-3-methyl-1H-indol-2-yl)-2-methyl-6-[(1-methylethyl)amino]-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 141772-02-3 CAPLUS

CN Phenol, 2-amino-4-(5-methoxy-3-methyl-1H-indol-2-yl)-, monohydrochloride (9CI) (CA INDEX NAME)

RN 141772-03-4 CAPLUS

CN Phenol, 2-(dimethylamino)-4-(5-methoxy-3-methyl-1H-indol-2-yl)-, monohydrochloride (9CI) (CA INDEX NAME).

● HCl

RN 141772-05-6 CAPLUS

CN Phenol, 2-amino-4-(3,5-dimethyl-1H-indol-2-yl)-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 141772-06-7 CAPLUS

CN Phenol, 2-amino-4-(3-methyl-1H-indol-2-yl)-, monohydrochloride (9CI) (CA INDEX NAME)

RN 141772-07-8 CAPLUS

CN Acetamide, N-[2-(3-amino-4-hydroxyphenyl)-3-methyl-1H-indol-5-yl]-, monohydrochloride (9CI) (CA INDEX NAME)

HCl

RN 141772-08-9 CAPLUS

CN Methanesulfonamide, N-[2-(3-amino-4-hydroxyphenyl)-3-methyl-1H-indol-5-yl]- (9CI) (CA INDEX NAME)

RN 141772-09-0 CAPLUS

CN Phenol, 2-(dimethylamino)-4-(3-methyl-1H-indol-2-yl)-, monohydrochloride (9CI) (CA INDEX NAME)

RN 141772-11-4 CAPLUS
CN Phenol, 2-(dimethylamino)-4-(5-fluoro-3-methyl-1H-indol-2-yl)-,
monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 141772-12-5 CAPLUS
CN Phenol, 2-(dimethylamino)-4-(3,5-dimethyl-1H-indol-2-yl)-,
monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 141772-13-6 CAPLUS
CN Acetamide, N-[2-[3-(dimethylamino)-4-hydroxyphenyl]-3-methyl-1H-indol-5-yl]- (9CI) (CA INDEX NAME)

RN 141772-14-7 CAPLUS

CN Methanesulfonamide, N-[2-[3-(dimethylamino)-4-hydroxyphenyl]-3-methyl-1H-indol-5-yl]-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 141772-15-8 CAPLUS

CN Phenol, 4-(5-amino-3-methyl-1H-indol-2-yl)-2-(dimethylamino)-, monohydrochloride (9CI) (CA INDEX NAME)

$$H_2N$$
 $Me$ 
 $NMe_2$ 
 $NMe_2$ 

● HCl

RN 141772-16-9 CAPLUS

CN Phenol, 2-amino-4-(5-amino-3-methyl-1H-indol-2-yl)-, monohydrochloride (9CI) (CA INDEX NAME)

$$_{\mathrm{H_2N}}$$
  $_{\mathrm{Me}}$   $_{\mathrm{NH_2}}$   $_{\mathrm{OH}}$ 

RN 141772-17-0 CAPLUS

CN Phenol, 4-(5-methoxy-3-methyl-1H-indol-2-yl)-2-(methylamino)- (9CI) (CA INDEX NAME)

RN 141772-18-1 CAPLUS

CN Phenol, 2-(dimethylamino)-4-(3,5-dimethyl-1H-indol-2-yl)-6-methyl-, monohydrochloride (9CI) (CA INDEX NAME)

HC]

RN 141772-19-2 CAPLUS

CN Acetamide, N-[2-hydroxy-3-methyl-5-[3-methyl-5-[(methylsulfonyl)amino]-1H-indol-2-yl]phenyl]- (9CI) (CA INDEX NAME)

RN 141772-20-5 CAPLUS

CN Acetamide, N-[2-hydroxy-3-methyl-5-[3-methyl-5-[(methylsulfonyl)amino]-1H-indol-2-yl]phenyl]-N-methyl- (9CI) (CA INDEX NAME)

RN 141772-21-6 CAPLUS

CN Phenol, 4-(5-methoxy-3-methyl-1H-indol-2-yl)-2-methyl-6-(4-morpholinyl)-, monohydrochloride (9CI) (CA INDEX NAME)

## HCl

RN 141772-22-7 CAPLUS

CN Phenol, 4-(5-methoxy-3-methyl-1H-indol-2-yl)-2-methyl-6-(1-piperidinyl)-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

GΙ

GΙ

$$R^2$$
 $X-Y$ 
 $AB$ 
 $X$ 

AΒ Title compds. I [X, Y, Z = 0, S, N, C and at least one of X, Y, and Z = 0,S, N; the dotted circle = one or two double bonds in any position; R1 = H, OH, alkyl, alkenyl, alkynyl, amino, cyano, etc.; R2 = H, halo, alkyl, alkoxy, alkylcarbonyl; V = CH, C (when bond with the 5-membered ring); W = O, S, NR3 (R3 = H, alkyl, alkenyl, alkynyl); A = bond, (substituted) alkylene; B = non-arom. aza(bi)cyclyl, NR4R5 (R4, R5 = H, alkyl, alkenyl, alkynyl, aralkyl)] are prepd. I are useful for treating psychotic disorders (e.g. schizophrenia, mania), anxiety, alc. or drug withdrawal, pain, gastric stasis, gastric dysfunction (e.g. peptic ulcer, esophageal reflux, flatulence), migraine, nausea, vomiting, and presenile and senile dementia (Alzheimer's disease) (no data). A mixt. of H2NOH, HCl, K2CO3, and 1-methylindole-3-nitrile in EtOH was refluxed to give 1-methylindol-3-ylamide oxime, which in DMF in the presence of mol. sieves was successively treated with NaH and 3-carbomethoxy-1azabicyclo[2.2.2]octane to give 3-[3-(methylindol-3-yl)-1,2,4-oxadiazol-5yl]-1-azabicyclo[2.2.2]octane.

L10 ANSWER 48 OF 52 CAPLUS COPYRIGHT 2003 ACS

AN 1989:85613 CAPLUS

DN 110:85613

TI Thermal recording material using chromeno compound for improved resistance to IR radiation

IN Kanda, Nobuo; Abe, Yukihiro; Kondo, Mitsuru

PA Kanzaki Paper Mfg. Co., Ltd., Japan

SO. Eur. Pat. Appl., 30 pp. CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	<b></b>					
	PATENT NO.		KIND	DATE	APPLICATION NO.	DATE
						<b>-</b>
ΡI	EP 273418		A2	19880706	EP 1987-119234	19871224
	EP 273418		A3	19900418		
	EP 273418		B1	19931124		
	R: DE	E, FR,	GB			
					JP 1986-314744	19861227
	JP 6316658	8	A2	19880709	JP 1986-314744	19861227
	US 4803193	}	A	19890207	US 1987-137368	19871223
					JP 1986-314744	19861227

OS CASREACT 110:85613

IT 118234-55-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, chromeno compd. from, for thermal recording material)

RN 118234-55-2 CAPLUS

CN Phenol, 2-(5-methyl-1H-indol-2-yl)- (9CI) (CA INDEX NAME)

Patel

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GI For diagram(s), see printed CA Issue.

A thermal recording material contains a colorless dye I [Z = N-contg]. AB 5-membered ring which may have an attached benzene ring and substituents; R1-R4 = H, C1-12 alkyl, C3-C12 alkenyl or alkynyl, C5-12 cycloalkyl, Ph, Ph-C1-2 alkyl, naphthyl; R1-R4 may form a part of a heterocycle] and a dye developer. The developer may be selected from polyvalent metal salts of arom. carboxylic acids. The above compn. may also contain an arom. diamine compd. The compn. forms images readable by optical character-reading devices. Thus, 3,6-bis(diethylamino)fluorenone was reacted with 2-(2-hydroxyphenyl) indole to obtain 3,6-bis (diethylamino) spiro [fluorene-9,6'-6'-H-chromeno (4,3-b) indole (II). Three different dispersions of II, 4,4'-isopropylidenediphenol, and stearic acid amide in aq. Me cellulose were mixed and used to form thermal recording papers. The papers produced images which were stable against heat, IR radiation, and humidity and had high d.

L10 ANSWER 49 OF 52 CAPLUS COPYRIGHT 2003 ACS

AN 1988:590304 CAPLUS

DN 109:190304

TI Fused heterocycles from o-acylbenzenethiol derivatives

AU McKinnon, David M.; Lee, Kingsley R.

CS Chem. Dep., Univ. Manitoba, Winnipeg, MB, R3T 2N2, Can.

SO Canadian Journal of Chemistry (1988), 66(6), 1405-9 CODEN: CJCHAG; ISSN: 0008-4042

DT Journal

LA English

OS CASREACT 109:190304

IT 117136-97-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and attempted cyclization of)

RN 117136-97-7 CAPLUS

CN Benzenethiol, 4-methyl-2-(3-methyl-1H-indol-2-yl)- (9CI) (CA INDEX NAME)

IT 117136-98-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and cyclization of, with hydrogen chloride)

RN 117136-98-8 CAPLUS

CN 1H-Indole, 2-[5-methyl-2-(methylsulfinyl)phenyl] - (9CI) (CA INDEX NAME)

IT 117136-95-5P 117136-96-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and cyclization of, with iodine)

RN 117136-95-5 CAPLUS

CN Benzenethiol, 2-(1H-indol-2-yl)- (9CI) (CA INDEX NAME)

RN 117136-96-6 CAPLUS

CN Benzenethiol, 2-(1H-indol-2-yl)-4-methyl- (9CI) (CA INDEX NAME)

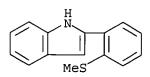
IT 117136-92-2P 117136-94-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and demethylation of, with sodium in ammonia)

RN 117136-92-2 CAPLUS

CN 1H-Indole, 2-[2-(methylthio)phenyl]- (9CI) (CA INDEX NAME)



RN 117136-94-4 CAPLUS

CN 1H-Indole, 3-methyl-2-[5-methyl-2-(methylthio)phenyl]- (9CI) (CA INDEX NAME)

IT 117136-93-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn., demethylation, and S-oxidn. of)

RN 117136-93-3 CAPLUS

CN 1H-Indole, 2-[5-methyl-2-(methylthio)phenyl]- (9CI) (CA INDEX NAME)

GΙ

The oximes of 2-acylthioanisole derivs. 2,5-MeS(R1)C6H3COR (R = Me, Et, Ph, 2-MeSC6H4; R1 = H, Me) may be conveniently converted into 1,2-benzisothiazoles I Ac2O in pyridine. I (R = 2-MeSC6H4, R1 = H), prepd. by this method, was further converted into the 1,2-benzisothiazolo[2,3-b]-1,2-benzisothiazolium system II. The phenylhydrazones of certain 2-acylthioanisoles are also cyclized by polyphosphoric acid to 2-(2-methylthio)phenylindoles, which are further converted into benzo[b]thieno[3,2-b]indoles III (R2 = H, Me) by demethylation and oxidn.

L10 ANSWER 50 OF 52 CAPLUS COPYRIGHT 2003 ACS

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added to PHAR

May 15 MEDLINE file segment of TOXCENTER reloaded

May 16 CHEMREACT will be removed from STN

May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated

May 19 Simultaneous left and right truncation added to WSCA

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Patel

NEWS 37

NEWS 39

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NEWS 41 May 19 RAPRA enhanced with new search field, simultaneous left and right truncation

NEWS 42 Jun 06 Simultaneous left and right truncation added to CBNB

NEWS 43 Jun 06 PASCAL enhanced with additional data

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=> file reg COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 12:23:19 ON 13 JUN 2003
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TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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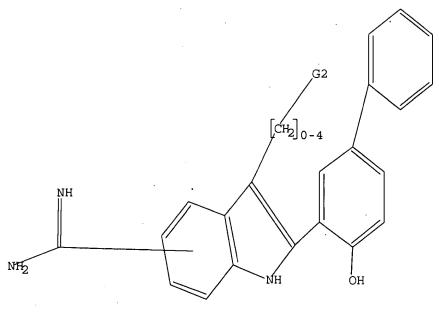
=> Uploading 09868276.4 09868276.4

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1

G2 C, H, Cb, Ak, Cy

G3 X, CH2, OH, PhO, COOH, NH, NH2, P

Structure attributes must be viewed using STN Express query preparation.

Page 3

=> s 11

SAMPLE SEARCH INITIATED 12:24:39 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 5 TO ITERATE

100.0% PROCESSED 5 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS:

5 TO · 234

PROJECTED ANSWERS:

0 TO

L2

0 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 12:24:47 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 71 TO ITERATE

100.0% PROCESSED 71 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

09868276.4 Page 4

=> log y COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

ENTRY 148.95 SESSION 149.16

STN INTERNATIONAL LOGOFF AT 12:24:53 ON 13 JUN 2003

09868276.2 Page 1

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                Sequence searching in REGISTRY enhanced
        Aug 26
NEWS 7
        Sep 03
                JAPIO has been reloaded and enhanced
NEWS 8
        Sep 16
                Experimental properties added to the REGISTRY file
NEWS 9
        Sep 16 CA Section Thesaurus available in CAPLUS and CA
        Oct 01
NEWS 10
                CASREACT Enriched with Reactions from 1907 to 1985
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NEWS 17 Dec 17
                TOXCENTER enhanced with additional content
NEWS 18 Dec 17
                Adis Clinical Trials Insight now available on STN
NEWS 19
        Jan 29
                Simultaneous left and right truncation added to COMPENDEX,
                ENERGY, INSPEC
NEWS 20 Feb 13
                CANCERLIT is no longer being updated
NEWS 21 Feb 24 METADEX enhancements
NEWS 22 Feb 24 PCTGEN now available on STN
NEWS 23 Feb 24 TEMA now available on STN
NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation
NEWS 25 Feb 26 PCTFULL now contains images
NEWS 26 Mar 04
                SDI PACKAGE for monthly delivery of multifile SDI results
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NEWS 28 Mar 24
                PATDPAFULL now available on STN
NEWS 29 Mar 24 Additional information for trade-named substances without
                structures available in REGISTRY
NEWS 30 Apr 11 Display formats in DGENE enhanced
NEWS 31 Apr 14 MEDLINE Reload
NEWS 32 Apr 17
                Polymer searching in REGISTRY enhanced
NEWS 33 Apr 21
                Indexing from 1947 to 1956 being added to records in CA/CAPLUS
NEWS 34 Apr 21
                New current-awareness alert (SDI) frequency in
                WPIDS/WPINDEX/WPIX
NEWS 35 Apr 28
                RDISCLOSURE now available on STN
NEWS 36 May 05 Pharmacokinetic information and systematic chemical names
                added to PHAR
NEWS 37
        May 15 MEDLINE file segment of TOXCENTER reloaded
NEWS 38
        May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 39
        May 16 CHEMREACT will be removed from STN
NEWS 40 May 19 Simultaneous left and right truncation added to WSCA
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09868276.2 Page 2

NEWS 41 May 19 RAPRA enhanced with new search field, simultaneous left and right truncation

NEWS 42 Jun 06 Simultaneous left and right truncation added to CBNB

NEWS 43 Jun 06 PASCAL enhanced with additional data

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COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.42 0.42

FULL ESTIMATED COST

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=> Uploading 09868276.2

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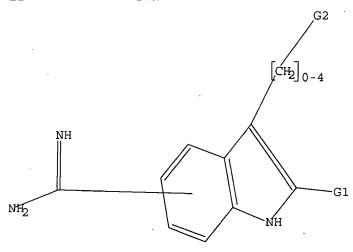
Page 3

L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

STR



G1 Cb,Cy,Hy G2 C, H, Cb, Ak, Cy

Structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 11:36:14 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 3719 TO ITERATE

26.9% PROCESSED 1000 ITERATIONS INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED) SEARCH TIME: 00.00.01

6 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS:

70724 TO 78036

PROJECTED ANSWERS:

163 TO

6 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 11:36:22 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 73093 TO ITERATE

100.0% PROCESSED 73093 ITERATIONS

181 ANSWERS

SEARCH TIME: 00.00.12

L3

181 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION

FULL ESTIMATED COST

149.75

150.17

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FILE COVERS 1907 - 13 Jun 2003 VOL 138 ISS 25 FILE LAST UPDATED: 12 Jun 2003 (20030612/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13

L4 737 L3

=> s 14 and heterocycle

L5 4 L4 AND HETEROCYCLE

=> d 15 fbib hitstr abs total

- L5 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS
- AN 2000:68450 CAPLUS
- DN 132:107953
- TI Preparation of heterocyclic compounds as antagonists of gonadotropin releasing hormone
- IN Goulet, Mark; Ashton, Wallace T.; Chu, Lin; Fisher, Michael H.; Lin,
   Peter; Ponpipom, Mitree M.; Wyvratt, Matthew J.; Girotra, Narindar N.;
   Young, Jonathan
- PA Merck and Co., Inc., USA
- SO PCT Int. Appl., 138 pp.

CODEN: PIXXD2

- DT Patent
- LA English

FAN. CNT 4

		-																
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									-									
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															SK,			
															MD,			
		RW:	GH,	GM,	ΚE,	LS,	MW,	SD,	SL,	SZ,	UG,	ZW,	AT,	BE,	CH,	CY,	DE,	DK,
			ES,	FI,	FR,	GB,	GR,	ΙE,	IT,	·LU,	MC,	NL,	PT,	SE,	BF,	ВJ,	CF,	CG,
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                      A1 20010502
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             IE, SI, LT, LV, FI, RO
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                                            WO 1999-US15581W 19990709
    JP 2002520409
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                            20020709
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                                            US 1998-115497 A 19980714
                                            WO 1999-US15581W 19990709
PATENT FAMILY INFORMATION:
FAN 1997:511777
                           DATE APPLICATION NO. DATE
     PATENT NO.
                    KIND DATE
                                           -----
                      ----
    WO 9721704 Al 19970619 WO 1996-US19444 19961210
PΤ
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             MR, NE, SN, TD, TG
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                            19970619
                                            CA 1996-2240108 19961210
                                            US 1995-8633P P 19951214
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    AU 9714106
                     A1
                            19970703
                                            AU 1997-14106
                                                             19961210
    AU 707641
                      B2
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                                            WO 1996-US19444W 19961210
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B1
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    EP 873336
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        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI
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                            19990217
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                             19980813
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                                            WO 1996-US19444W 19961210
FAN
    1998:479019
     PATENT NO.
                      KIND
                            DATE
                                            APPLICATION NO. DATE
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PΙ
     US 5780437
                             19980714
                       Δ
                                            US 1996-760816
                                                             19961205
     US 6200957
                                            US 1998-115497 19980714
                       B1
                             20010313
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                                            US 1996-760816 A219961205
FAN 2001:178434
     PATENT NO.
                      KIND
                            DATE
                                            APPLICATION NO.
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                            _____
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                             20010313
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                       Α
                            19980714
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                            20010417
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                                            JP 1997-522124 A319961210
     ZA 9610536
                       Α
                             19970814
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                             20000127
                                            CA 1999-2337407 19990709
                                            US 1998-115497 A 19980714
                                            WO 1999-US15581W 19990709
     WO 2000004013
                      A1
                            20000127
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            AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD,
             GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV,
             MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR,
             TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                            US 1998-115497 A 19980714
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                       A1
                             20000207
                                            AU 1999-49816 19990709
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     EP 1095038
                       A1
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             IE, SI, LT, LV, FI, RO
                                            US 1998-115497 A 19980714
                                            WO 1999-US15581W 19990709
     JP 2002520409
                      T2
                            20020709
                                            JP 2000-560119 19990709
                                            US 1998-115497 A 19980714
                                            WO 1999-US15581W 19990709
OS
    MARPAT 132:107953
     192644-10-3P
ΙT
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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of heterocyclic compds. as antagonists of gonadotropin releasing hormone)

RN 192644-10-3 CAPLUS

CN Carbamic acid, [2-[2-(3,5-dimethylphenyl)-5-[(hydroxyamino)iminomethyl]-1H-indol-3-yl]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ \text{HO-NH-C} & & \\ & & \\ \text{NH} & & \\ &$$

GΙ

$$R^{8}$$
 $R^{7}X$ 
 $(CR^{9}R^{9}?) m - C - N - (A) - R^{1}$ 
 $R^{1}0R^{2}$ 
 $R^{1}0R^{2}$ 

$$\begin{array}{c|c}
 & CH_2 \\
 & NH \\
 & CH_2 \\
 & Me
\end{array}$$

Me

The title compds. of formula I [A = (un)substituted C1-6 alkyl, (un)substituted C3-7 cycloalkyl, (un)substituted C3-6 alkenyl, (un)substituted C3-6 alkynyl, etc; R0 = H, (un)substituted C1-6 alkyl, etc; R1 = generic heteroarom. rings with proviso given; R2 = H, (un)substituted C1-6 alkyl, (un)substituted aryl, etc; R2, A = combined

Patel

ΙI

form 5-7 atom ring; R3, R4, R5 = H, (un)substituted C1-6 alkyl, (un)substituted C2-6 alkenyl, CN, NO2, C1-3 perfluoroalkyl, etc; R3, R4 = combined form ring of 3-7 carbon atoms or a heterocyclic ring contg. 1-3 heteroatoms; R6, R7 = H, (un)substituted C1-6 alkyl, etc; R8 = C(0)OR20, C(0)NR20R21, NR20R21, etc with proviso given; R7, R8 = combined form hetercyclic ring; R9, R9a = H, (un)substituted C1-6 alkyl, etc; R9, R9a = combined form carbocyclic ring of 3-7 atoms; R10, R10a = H, (un)substituted C1-6 alkyl, (un)substituted aryl, etc; R10, R10a = combined form carbocyclic ring of 3-7 atoms, double bond oxygen] useful as gonadotropin releasing hormone antagonists (no data), are prepd. For example, the title compd. II was prepd.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
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- AN 1997:511777 CAPLUS
- DN 127:121742
- TI Preparation of heterocyclic compounds as antagonists of gonadotropin releasing hormone
- IN Goulet, Mark; Ashton, Wallace T.; Chu, Lin; Fisher, Michael H.; Girotra,
   Narindar N.; Lin, Peter; Wyvratt, Matthew J.
- PA Merck & Co., Inc., USA; Goulet, Mark; Ashton, Wallace T.; Chu, Lin; Fisher, Michael H.; Girotra, Narindar N.; Lin, Peter; Wyvratt, Matthew J.
- SO PCT Int. Appl., 117 pp. CODEN: PIXXD2
- DT Patent
- LA English
- FAN CNT 4

FAN.	CNT	4																	
	PAT	TENT					DATE								DATE				
ΡI	PI WO 9721704				A1 19970619					WO 1996-US19444									
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			ΙL,	IS,	JΡ,	KG,	KR,	KZ,	LC,	LK,	LR,	LT,	LV,	MD,	MG,	MK,	MN,	MX,	
							RU,					TM,	TR,	TT,	UA,	US,	UZ,	VN,	
							KZ,												
		RW:	KE,	LS,	MW,	SD,	SZ,	UG,	AT,	BE,	CH,	DE,	DK,	ES,	FI,	FR,	GB,	GR,	
							ΝL,	PT,	SE,	ΒF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	ML,	
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															1995				
															1996				
	CA	2240	108		A	A	1997	0619											
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															1996				
		9714								· At	J 19	97-1	4106		1996	1210		•	
	AU	7076	41		В	2	1999	0.715											
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	JP	1150	6471		T	2 .	1999	0608		J1	P 19	96-5	2212	4	1996	1210			

	JP 2001106685	A2	20010417	US 1995-8633P P 19951214 GB 1996-3242 A 19960216
	JP 3230818	В2	20011119	JP 1997-522124 A319961210 JP 1997-522124 19961210 US 1995-8633P P 19951214 GB 1996-3242 A 19960216
	AT 215081	E	20020415	AT 1996-944249 19961210 US 1995-8633P P 19951214 GB 1996-3242 A 19960216
	ES 2174129	Т3	20021101	WO 1996-US19444W 19961210 ES 1996-944249 19961210 US 1995-8633P P 19951214
	ZA 9610536	A	19970814	
	NO 9802729	<b>A</b> .	19980813	US 1995-8633P P 19951214 NO 1998-2729 19980612 US 1995-8633P P 19951214 GB 1996-3242 A 19960216
PATE	NT FAMILY INFORM	MATION:		WO 1996-US19444W 19961210
FAN	1998:479019 PATENT NO.		DATE	APPLICATION NO. DATE
PI				US 1996-760816 19961205 US 1998-115497 19980714 US 1995-8633P P 19951214 US 1996-760816 A219961205
FAN		KIND.	DATE	APPLICATION NO. DATE
ΡΙ	GE, HR,	AM, AU, HU, ID,	AZ, BA, IL, IN,	WO 1999-US15581 19990709 BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR,
	TT, UA, RW: GH, GM, ES, FI,	US, UZ, KE, LS, FR, GB,	VN, YU, MW, SD, GR, IE,	ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, MR, NE, SN, TD, TG
,	US 6200957	B1	20010313	US 1998-115497 A 19980714 US 1998-115497 19980714 US 1995-8633P P 19951214
	CA 2337407	AA	20000127	US 1996-760816 A219961205 CA 1999-2337407 19990709 US 1998-115497 A 19980714
	AU 9949816	A1	20000207	WO 1999-US15581W 19990709 AU 1999-49816 19990709 US 1998-115497 A 19980714
		A1 CH, DE, LT, LV,		WO 1999-US15581W 19990709 EP 1999-933850 19990709 FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
	JP 2002520409	Т2	20020709	US 1998-115497 A 19980714 WO 1999-US15581W 19990709 JP 2000-560119 19990709

US 1998-115497 A 19980714 WO 1999-US15581W 19990709 FAN 2001:178434 PATENT NO. KIND DATE APPLICATION NO. ΡI US 6200957 B1 20010313 US 1998-115497 19980714 US 1995-8633P P 19951214 US 1996-760816 A219961205 US 5780437 19980714 US 1996-760816 Α 19961205 JP 2001106685 A2 20010417 JP 2000-257791 19961210 US 1995-8633P P 19951214 GB 1996-3242 A 19960216 JP 1997-522124 A319961210 ZA 9610536 Α 19970814 ZA 1996-10536 19961213 US 1995-8633P P 19951214 CA 2337407 AA 20000127 CA 1999-2337407 19990709 US 1998-115497 A 19980714 WO 1999-US15581W 19990709 WO 2000004013 Α1 20000127 WO 1999-US15581 19990709 AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, RW: GH, GM, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG US 1998-115497 A 19980714 AU 9949816 20000207 A1 AU 1999-49816 19990709 US 1998-115497 A 19980714 WO 1999-US15581W 19990709 EP 1095038 20010502 Α1 EP 1999-933850 19990709 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE , SI, LT, LV, FI, RO US 1998-115497 A 19980714 WO 1999-US15581W 19990709 JP 2002520409 T2 20020709 JP 2000-560119 19990709 US 1998-115497 A 19980714 WO 1999-US15581W 19990709 OS MARPAT 127:121742 IT 192644-10-3P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. of heterocyclic compds. as antagonists of gonadotropin releasing hormone) RN 192644-10-3 CAPLUS CN Carbamic acid, [2-[2-(3,5-dimethylphenyl)-5-[(hydroxyamino)iminomethyl]-1Hindol-3-yl]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ \text{HO-NH-C} & & \\ & & \\ \text{NH} & & \\ &$$

09868276.2

$$\begin{array}{c|c} & & & \\ & & \\ \text{HO-NH-C} & & \\ & & \\ \text{NH} & & \\ &$$

GI

$$R^{7}$$
 $R^{8}$ 
 $R^{7}$ 
 $R^{8}$ 
 $R^{7}$ 
 $R^{8}$ 
 $R^{2}$ 
 $R^{20}$ 
 $R^{10}$ 
 $R^{10}$ 

Me

ΙI

The title compds. I [A = alkyl, etc.; R = H, alkyl, etc.; R1 = heterocyclic ring (generic structures given); R2 = H, alkyl, etc.; or R2A = ring; R3, R4, R5 = H, (un)substituted alkyl, alkenyl, etc.; or R3R4 = ring; R6 = H, (un)substituted alkyl, etc.; R7 = H, (un)substituted alkyl; unless X is hydrogen or halo, then R7 is absent; R8 = heterocyclic ring, etc.; or R7R8 = heterocyclic ring; R9, R19 = H, (un)substituted alkyl; further details on R9R19 and R9A are given; R20, R10 = H, (un)substituted alkyl, etc.; further details on R20R10, and R9R20, R9R2, R20R2, R20A are given; m = 0 to 3; X = N, etc.], useful as antagonists of gonadotropin releasing hormone (no data), are prepd. I may be useful for the treatment of a variety of sex-hormone related and other conditions in both men and women. The title compd. II was prepd. in a multistep process.

L5 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1994:153643 CAPLUS

DN 120:153643

TI Studies on the ability of minor groove binders to induce supercoiling in

DNA

AU Stoerl, K.; Burckhardt, G.; Lown, J. W.; Zimmer, Ch.

CS Department of Molecular Biology, Institute of Molecular Biology, Friedrich-Schiller-University, Winzerlaer Strasse 10, Jena, 07708, Germany

SO FEBS Letters (1993), 334(1), 49-54 CODEN: FEBLAL; ISSN: 0014-5793

DT Journal

LA English

IT 47165-04-8

RL: BIOL (Biological study)
(DNA supercoiling response to)

RN 47165-04-8 CAPLUS

CN 1H-Indole-6-carboximidamide, 2-[4-(aminoiminomethyl)phenyl]- (9CI) (CA INDEX NAME)

$$H_2N-C$$
 $H_2N-C$ 
 $H$ 

AB The effect of various non-intercalating minor groove binders on closed circular DNA in the presence of topoisomerase I has been studied by means of agarose gel electrophoresis. Analogs of the netropsin series (lexitropsins) and SN-6999 can effectively produce pos. supercoils, as indicated by anal. of the topoisomers in the presence of chloroquine and the evaluated linking no. changes. Analogs of the distamycin series are less effective, and bisquaternary ammonium heterocycles, as well as DAPI and pentamidine, were found to be ineffective ligands. The large differences obsd. in the ability of minor groove binders to induce pos. supercoils are discussed.

L5 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1990:229384 CAPLUS

DN 112:229384

TI The interaction of unfused polyaromatic **heterocycles** with DNA: intercalation, groove-binding and bleomycin amplification

AU Wilson, W. D.; Tanious, F. A.; Barton, H. J.; Wydra, R. L.; Jones, R. L.; Boykin, D. W.; Strekowski, L.

CS Dep. Chem., Georgia State Univ., Atlanta, GA, 30303, USA

SO Anti-Cancer Drug Design (1990), 5(1), 31-42 CODEN: ACDDEA; ISSN: 0266-9536

DT Journal; General Review

LA English

IT 47165-04-8, 4',6-Diamidino-2-phenylindole

RL: PRP (Properties)

(interaction of, with DNA, bleomycin neoplasm-inhibiting activity amplification in relation to)

RN 47165-04-8 CAPLUS

CN 1H-Indole-6-carboximidamide, 2-[4-(aminoiminomethyl)phenyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{NH} \\ \parallel & \parallel \\ \text{H}_2\text{N-C} & \parallel \\ & \parallel \\ & \text{NH} \end{array}$$

AB A no. of unfused-arom. cations have been found to bind to DNA by intercalation and to amplify the bleomycin catalyzed cleavage of DNA. These mols. are more similar in structure to unfused minor-groove binding compds. such as netropsin and 4',6-diamidino-2-phenylindole (DAPI) than to fused-ring intercalators such as proflavine. An anal. of DAPI interactions with specific sequence DNA polymers has indicated that the binding modes for the mol. are sequence dependent: minor groove binding in sequences of three or more AT base pairs and intercalation in mixed or pure GC base pair sequences. As with other unfused intercalators which bind with their cationic side chains in the major groove, the amidinium groups of DAPI are in the major groove in the GC intercalation complex. DAPI is, thus, a good bleomycin amplifier in GC sequences but its minor-groove binding mode in AT sequences leads to bleomycin inhibition. Other results on bleomycin amplifiers are reviewed.

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
CONNECT CHARGES	0.68	2.68
NETWORK CHARGES	0.12	0.54
SEARCH CHARGES	1.64	149.39
DISPLAY CHARGES	28.78	28.78
	<del></del>	
•	31.22	181.39
CAPLUS FEE (5%)	1.56	1.56
•		
FULL ESTIMATED COST	32.78	182.95
DICCOINE MOINES (DOD OUT I DUING A GOODIES)	073700 0770	mom
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
CA CUMCONIDED DOLCE	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.60	-2.60

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L10 ANSWER 48 OF 52 CAPLUS COPYRIGHT 2003 ACS
      1989:85613 CAPLUS
 DN
      110:85613
     Thermal recording material using chromeno compound for improved resistance
 ΤI
     Kanda, Nobuo; Abe, Yukihiro; Kondo, Mitsuru
 IN
     Kanzaki Paper Mfg. Co., Ltd., Japan
 PA
     Eur. Pat. Appl., 30 pp.
 SO
     CODEN: EPXXDW
DT
     Patent
LΑ
     English
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                       · APPLICATION NO. DATE
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                                         -----
     EP 273418
PΙ
                                                          -----
                     A2
                           19880706
                                         EP 1987-119234
                                                          19871224
     EP 273418
                     A3
B1
                           19900418
     EP 273418
                           19931124
        R: DE, FR, GB
                                         JP 1986-314744
     JP 63166588
                                                          19861227
                     A2
                           19880709
                                         JP 1986-314744
     US 4803193
                                                          19861227
                      Α
                           19890207
                                         US 1987-137368
                                                          19871223
                                         JP 1986-314744
OS
    CASREACT 110:85613
                                                          19861227
ΙT
    118234-55-2
    RL: RCT (Reactant); RACT (Reactant or reagent)
       (reaction of, chromeno compd. from, for thermal recording material)
RN
    118234-55-2 CAPLUS
    Phenol, 2-(5-methyl-lH-indol-2-yl)- (9CI) (CA INDEX NAME)
```

Patel

<6/13/2003>

09868276.1

For diagram(s), see printed CA Issue. GI A thermal recording material contains a colorless dye I [Z = N-contg. AB 5-membered ring which may have an attached benzene ring and substituents; R1-R4 = H, C1-12 alkyl, C3-C12 alkenyl or alkynyl, C5-12 cycloalkyl, Ph, Ph-C1-2 alkyl, naphthyl; R1-R4 may form a part of a heterocycle and a dye developer. The developer may be selected from polyvalent metal salts of arom. carboxylic acids. The above compn. may also contain an arom. diamine compd. The compn. forms images readable by optical character-reading devices. Thus, 3,6-bis(diethylamino)fluorenone was reacted with 2-(2-hydroxyphenyl) indole to obtain 3,6-bis(diethylamino)spiro[fluorene-9,6'-6'-H-chromeno(4,3-b) indole] (II). Three different dispersions of II, 4,4'-isopropylidenediphenol, and stearic acid amide in aq. Me cellulose were mixed and used to form thermal recording papers. The papers produced images which were stable against heat, IR radiation, and humidity and ha high d.

L10 ANSWER 49 OF 52 CAPLUS COPYRIGHT 2003 ACS

AN 1988:590304 CAPLUS

DN 109:190304

TI Fused heterocycles from o-acylbenzenethiol derivatives

AU McKinnon, David M.; Lee, Kingsley R.

CS Chem. Dep., Univ. Manitoba, Winnipeg, MB, R3T 2N2, Can.

SO Canadian Journal of Chemistry (1988), 66(6), 1405-9

CODEN: CJCHAG; ISSN: 0008-4042

DT Journal

LA English

OS CASREACT 109:190304

IT 117136-97-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and attempted cyclization of)

RN 117136-97-7 CAPLUS

CN Benzenethiol, 4-methyl-2-(3-methyl-1H-indol-2-yl)- (9CI) (CA INDEX NAME)

IT 117136-98-8P

Patel

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and cyclization of, with hydrogen chloride)

RN 117136-98-8 CAPLUS

CN 1H-Indole, 2-[5-methyl-2-(methylsulfinyl)phenyl]- (9CI) (CA INDEX NAME)

<6/13/2003>

IT 117136-95-5P 117136-96-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and cyclization of, with iodine)

CN Benzenethiol, 2-(1H-indol-2-yl)- (9CI) (CA INDEX NAME)

RN 117136-96-6 CAPLUS

CN Benzenethiol, 2-(1H-indol-2-yl)-4-methyl- (9CI) (CA INDEX NAME)

IT 117136-92-2P 117136-94-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and demethylation of, with sodium in ammonia)

RN 117136-92-2 CAPLUS

CN 1H-Indole, 2-[2-(methylthio)phenyl]- (9CI) (CA INDEX NAME)

RN 117136-94-4 CAPLUS

CN 1H-Indole, 3-methyl-2-[5-methyl-2-(methylthio)phenyl]- (9CI) (CA INDEX NAME).

IT 117136-93-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn., demethylation, and S-oxidn. of)

RN 117136-93-3 CAPLUS

CN 1H-Indole, 2-[5-methyl-2-(methylthio)phenyl]- (9CI) (CA INDEX NAME)

GΙ

The oximes of 2-acylthioanisole derivs. 2,5-MeS(R1)C6H3COR (R = Me, Et, Ph, 2-MeSC6H4; R1 = H, Me) may be conveniently converted into 1,2-benzisothiazoles I Ac2O in pyridine. I (R = 2-MeSC6H4, R1 = H), prepd. by this method, was further converted into the 1,2-benzisothiazolo[2,3-b]-1,2-benzisothiazolium system II. The phenylhydrazones of certain 2-acylthioanisoles are also cyclized by polyphosphoric acid to 2-(2-methylthio)phenylindoles, which are further converted into benzo[b]thieno[3,2-b]indoles III (R2 = H, Me) by demethylation and oxidn.

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